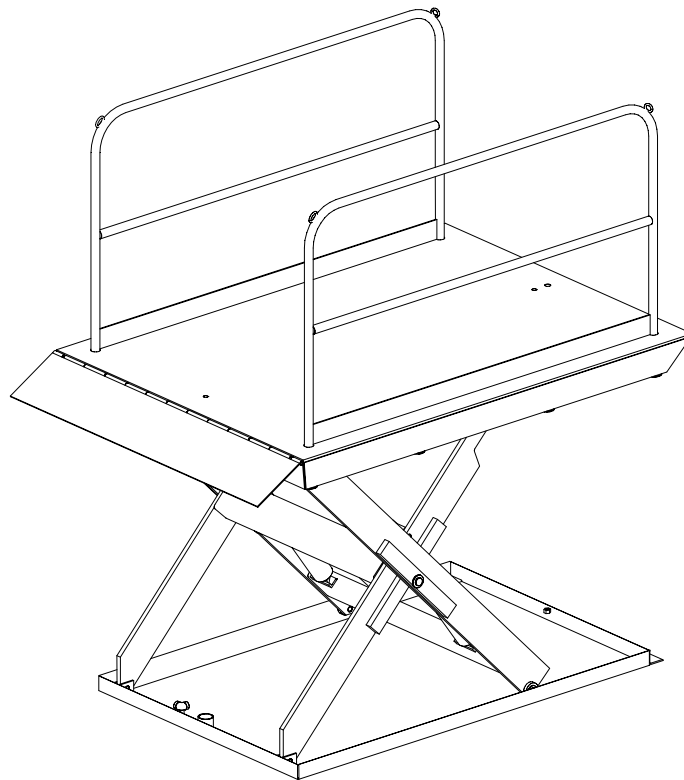


INSTALLATION, OPERATION AND SERVICE MANUAL

PLT SCISSORS DOCK LIFT



P.O. Box 1058 • 1058 West Industrial Avenue • Guthrie, OK 73044-1058 • 405-282-5200
• FAX: 405-282-8105 • www.autoquip.com

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IMPORTANT

Please read and understand this manual prior to installation or operation of this lift. Failure to do so could lead to property damage and/or serious personal injury. If questions arise, call a local representative or *Autoquip Corporation* at 1-888-811-9876 or 405-282-5200.

PLANNED MAINTENANCE PROGRAM

A local *Autoquip* representative provides a Planned Maintenance Program (PMP) for this equipment using factory-trained personnel. Call a local representative or *Autoquip Corporation* at 1-888-811-9876 or 405-282-5200 for more information.

IDENTIFICATION & INSPECTION

IDENTIFICATION

When ordering parts or requesting information or service on this lift, PLEASE REFER TO THE MODEL AND SERIAL NUMBER. This information is on a nameplate attached to the leg assembly. Replacement parts are available from a local *Autoquip* distributor.

INSPECTION

Immediately upon receipt of the lift, a visual inspection should be made to determine that the lift has not been damaged in transit. Any damage found must be noted on the delivery receipt. In addition to this preliminary inspection, the lift should be carefully inspected for concealed damage. Any concealed damage found that was not noted on the delivery receipt should be reported in writing to the delivering carrier within 48 hours.

The following is a checklist that will aid in the inspection of the lift.

1. Examine entire unit for any signs of mishandling. Pay special attention to the power unit and controls.
2. Thoroughly examine all connections, making sure they have not vibrated loose during transit.
3. After installation, raise the lift and inspect the base frame and scissors assembly.

RESPONSIBILITY OF OWNERS/USERS

DEFLECTION

It is the responsibility of the user/purchaser to advise the manufacturer where deflection may be critical to the application.

INSPECTION & MAINTENANCE

The lift shall be inspected & maintained in proper working order in accordance with Autoquip's operating/maintenance (O&M) manual and with other applicable safe operating practices.

REMOVAL FROM SERVICE

Any lift not in safe operating condition such as, but not limited to, excessive leakage, missing rollers, pins, or fasteners, any bent or cracked structural members, cut or frayed electric, hydraulic, or pneumatic lines, damaged or malfunctioning controls or safety devices, or any other indication of excessive wear or worn parts shall be removed from service until it is repaired to the original manufacturer's standards.

REPAIRS

All repairs shall be made by qualified personnel in conformance with Autoquip's instructions, and be made using only authorized, Autoquip parts.

OPERATORS

Only trained personnel and authorized personnel shall be permitted to operate the lift.

BEFORE OPERATION

Before using the lift, the operator shall have:

- Read and/or had explained, and understood, the manufacturer's operating instructions and safety rules.
- Inspected the lift for proper operation and condition. Any suspect item shall be carefully examined and a determination made by a qualified person as to whether it constitutes a hazard. All items not in conformance with Autoquip's specification shall be corrected before further use of the lift.

DURING OPERATION

The lift shall only be used in accordance with Autoquip's O&M manual.

- Do not overload the lift.
- Ensure that all safety devices are operational and in place.

MODIFICATIONS OR ALTERATIONS

Modifications or alterations to industrial lifting equipment shall be made only with expressed, written permission of Autoquip. Unauthorized modifications or parts replacements with unauthorized or non-specified parts could adversely affect the performance, code compliance, or safety of the equipment and are grounds for voiding all warranties.

SAFETY SIGNAL WORDS

SAFETY ALERTS (Required Reading!)

The following SAFETY ALERTS are intended to create awareness of owners, operators, and maintenance personnel of the potential safety hazards and the steps that must be taken to avoid accidents. These same alerts are inserted throughout this manual to identify specific hazards that may endanger uninformed personnel. Identification of every conceivable hazardous situation is impossible. Therefore, all personnel have the responsibility to diligently exercise safe practices whenever exposed to this equipment.



DANGER!

Identifies a hazardous situation which, if not avoided, will result in death or severe personal injury.



WARNING!

Identifies a hazardous situation which, if not avoided, could result in death or serious personal injury.



CAUTION!

Identifies a hazardous situation which, if not avoided, may result in minor or moderate personal injury.

CAUTION!

Caution used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property or equipment damage.

SAFETY PRACTICES

Read and understand this manual and all labels prior to operating or servicing the lift. All labels are provided in accordance with ANSI Z535.4.



DANGER!

Do not work under lift without maintenance device!

To avoid personal injury, NEVER go under the lift platform until the load is removed and the scissors mechanism is securely blocked in the open position. See "Lift Blocking Instructions" section.



DANGER!

To avoid personal injury, stand clear of scissors leg mechanism while lift is in motion.



DANGER!

Do not install the lift in a pit unless it has a bevel toe guard or other approved toe protection. A shear point can exist which can cause severe injury to the foot.



DANGER!

HIGH VOLTAGE!! Disconnect and/or lock out the electrical supply to the power unit per OSHA Lock-Out, Tag-Out procedures prior to any maintenance being performed.



DANGER!

Extending the platform length or width beyond the factory limit could cause the unit to tip, which could result in personal injury or death.

SAFETY PRACTICES



DANGER !

Do not attempt to remove the velocity fuse until the maintenance leg securely supports the lift and all hydraulic pressure has been removed from the lifting cylinders and hydraulic hoses. Failure to do so could result in personal injury or death!



DANGER !

Failure to relieve lift table system pressure could result in the sudden and unexpected release of pressure during maintenance and/or repair of the lift and result in severe injury to personnel and/or damage to the lift.



WARNING !

Do not make modifications to the lift or add unauthorized or unspecified components to the lift. Modifications to the lift can result in unsafe operating conditions which could lead to serious injury or death.



WARNING!

Do not operate this equipment without handrails and snap chains in place.



WARNING!

Under no circumstances should the speed control orifice be removed from the Deltatrol to obtain faster lowering speed. A loaded lift can reach dangerous and destructive speed!!

SAFETY PRACTICES



WARNING!

All warning and information decals should be in place as outlined in the “Label Identification” section. If decals are missing or damaged, they should be replaced with new ones. Contact an *Autoquip* representative for replacements.



WARNING!

Lift platforms traveling below floor levels may create openings, and the shape of the load and how the load is arranged on the lift may create a toe hazard as the load passes the top edge of the pit. Both situations may require guarding in accordance with Federal Regulations. Any such guarding must be installed prior to operating the lift



CAUTION !

Lifts should not be overloaded beyond the established capacity as damage and/or personal injury may result.



CAUTION !

Only trained and qualified personnel should operate this equipment.



CAUTION !

Whenever raising or lowering the lift, personnel should maintain a safe operating distance of at least 36” to avoid personal injury.

SAFETY PRACTICES



CAUTION !

Any lift which has a hinged throw-over bridge damaged to the point of hanging more than 30 degrees below horizontal is in violation of the safety standards set forth in ANSI MH29.1 and **MUST** be taken out of service until the bridge is repaired or replaced. Failure to do so could result in severe personal injury or permanent damage to the lift.

CAUTION!

Never run the pump for more than a couple of seconds without pumping oil. This applies to low oil conditions, improper motor rotation, running the pump against the relief pressure after the lift is fully raised against the physical stops, running overloaded beyond capacity, or running at reduced speed because of pinched or obstructed hydraulic lines.

CAUTION!

Do not continue to depress the “UP” button on the controller if the lift is not raising or if the lift has reached the fully raised position. To do so may result in permanent damage to the motor or pump.

CAUTION!

Do not operate the power unit on relief for more than a few seconds. When on relief, the valve will make a squealing sound.

CAUTION!

Precautions should be taken to prevent the introduction of contaminants such as dirt or other foreign material into the system through open fittings, pipes or disassembled components. Contamination will ruin the hydraulic system.

CAUTION!

Use only approved oils in the lift. See “Specifications” section.

LABEL IDENTIFICATION

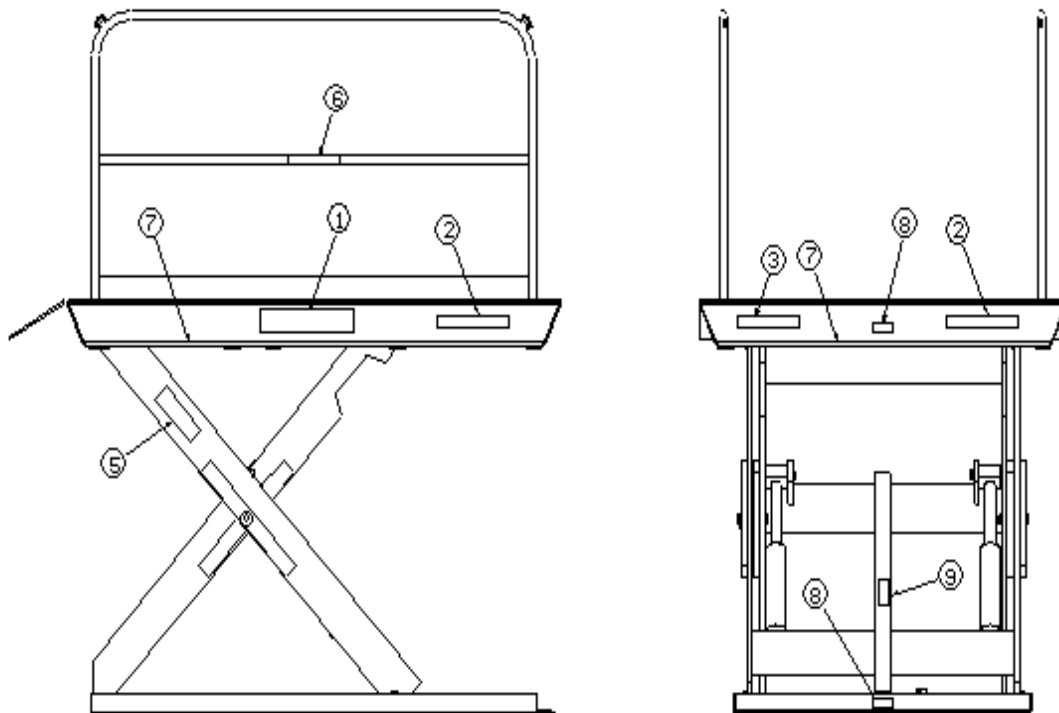


Figure 1 Label Placement

PLT			
Item No.	Qty	Description	Part No.
1	2	Capacity	36401594
2	4	Danger – Do Not Put Hands Or Feet . . .	3643005OM
3	2	Caution: Familiarize Yourself With Operators Manual	36401487
5	1	<i>Autoquip</i> Serial Number Nameplate	36401511
6	2	Warning: Do Not Operate This Equipment Without . . .	36403715
7	1	Black & Yellow Striped Tape	06100010
8	2	Leg Socket	36400265
9	1	Maintenance Leg	36400257

LABEL IDENTIFICATION

Note: Labels shown here are not actual size.



Figure 2 Label 36401594



Figure 3 Label 3643005OM



Figure 4 Label 36401487

LABEL IDENTIFICATION



Figure 5 Label 36401511



Figure 6 Label 36403715

LABEL IDENTIFICATION



Figure 7 Label 06100010



Figure 8 Label 36400265



Figure 9 Label 36400257

SPECIFICATIONS

*Model	Lowered Height (Inches)	Lift Capacity	Axle Load Capacity (Bridge End)	Axle Load Capacity (Opposite Bridge End)	Axle Load Capacity (Over Sides)	Platform Size (Inches)	Lift Wt.
6050	8	5,000	3,000	3,000	2,500	71-1/2 x 96	2,800
6050A	8	5,000	3,000	3,000	2,000	96 x 96	3,300
6050S	8	5,000	2,000	2,000	2,500	72 x 120	3,400
6050B	8	5,000	2,000	2,000	2,250	84 x 120	3,400
6060	8	6,000	3,000	3,000	2,500	71-1/2 x 96	3,000
6060A	8	6,000	3,000	3,000	2,000	96 x 96	3,400
6060S	8	6,000	2,000	2,000	2,500	72 x 120	3,400
6060B	8	6,000	2,000	2,000	2,250	84 x 120	3,500
6070	12	7,000	6,400	6,400	6,400	72 x 100	4,600
6070A	12	7,000	6,400	6,400	6,400	96 x 100	4,780
6070S	12	7,000	6,400	6,400	6,400	72 x 120	4,800
6070B	12	7,000	6,400	6,400	6,400	84 x 120	4,900
6080	12	8,000	6,400	6,400	6,400	72 x 100	4,700
6080A	12	8,000	6,400	6,400	6,400	96 x 100	4,890
6080S	12	8,000	6,400	6,400	6,400	72 x 120	4,800
6080B	12	8,000	6,400	6,400	6,400	84 x 120	5,100
60100	12	10,000	8,000	8,000	6,400	72 x 100	4,800
60100A	12	10,000	8,000	8,000	6,400	96 x 100	4,990
60100S	12	10,000	6,400	6,400	6,400	72 x 120	4,900
60100B	12	10,000	6,400	6,400	6,400	84 x 120	5,200

* All PLT Models have 60-inch travel.

NOTE: All PLT Series Lifts have a rollover capacity equal to twice the lifting capacity when in the fully lowered position.

LOAD CAPACITY

The load capacity rating is stamped on a metal plate attached to one side of the lift. This figure is a net capacity rating for a lift furnished with the standard platform. The relief valve of the pumping unit has been set to raise the weight, plus a small amount for overload. Where gravity roll-sections, special tops, etc., are installed on the lift after leaving the plant, deduct the weight of these from the load rating to obtain the net capacity.



CAUTION!

Lifts should not be overloaded beyond the established capacity as damage and/or personal injury may result.

SPECIFICATIONS

UNBALANCED LOADING

The stabilization provided is basically for balanced loads. If special attachments extend beyond the length and/or width dimensions of the platform, the end and/or side load capacity must be reduced (contact an Autoquip Sales representative).

PUMP PRESSURE

This lift incorporates a positive displacement pump machined to a high degree of accuracy and specially adapted to requirements of higher-pressure ranges over that of a standard pump. Therefore, standard factory models of the same manufacture cannot replace it.

The pump can operate efficiently at intermittent pressures up to 3200 PSI and continuous duty to 2500 PSI. The safety relief valve in the pump assembly is factory-set to stay within the parameters of the pump and lift requirements.

LIFT BLOCKING INSTRUCTIONS



WARNING !

Only trained and qualified personnel should perform inspection or maintenance and service procedures.



DANGER !

Failure to properly adhere to lift blocking procedures is to risk the sudden and uncontrolled descent of the lift during maintenance or inspection. A falling lift can cause severe injury or death.

This procedure describes the only factory-approved method of working under a lift table. Follow these instructions ANY time you plan to reach or work beneath the lift – no matter how momentary that might be.

If the factory-provided maintenance device is damaged or missing, stop immediately and consult the factory for assistance. The manufacturer is not liable for your failure to use the approved maintenance devices and procedures that have been provided.

1. All load must be removed from the lift prior to engaging the maintenance device. These devices are designed to support an unloaded lift only. Failure to remove the load from the lift prior to blocking could allow the lift to fall unexpectedly, resulting in permanent damage to or failure of the maintenance device and/or lift table.
2. Raise the lift to its fully raised position. If you do not, the maintenance device may not be able to be placed properly in its designed blocking position.
3. Remove the maintenance leg from its storage location on the clevis end of the lift - either under the platform or between the legs. Place one end of the maintenance leg in the socket on the base frame of the lift (See Figure 10).
4. Lower the lift platform until it comes down and makes contact with the maintenance leg within the circular socket welded underneath the platform. Check again to ensure that the device is inside the maintenance collar and in contact with the platform deck surface. If the maintenance leg is not fully engaged the lift could fall unexpectedly, resulting in permanent damage to the devices or the lift table.

LIFT BLOCKING INSTRUCTIONS



DANGER !

If for any reason you are unable to lower the lift completely onto the maintenance device(s), stop immediately and consult the factory. Failure to properly use the factory approved maintenance device(s) could result in severe injury or death.

5. Once the maintenance device(s) are properly engaged, continue to press the down button or switch for an additional 5-10 seconds to relieve all hydraulic/pneumatic pressure in the system.



DANGER !

Failure to relieve lift table system pressure could result in the sudden and unexpected release of pressure during maintenance and/or repair of the lift and result in severe injury to personnel and/or damage to the lift.

6. Follow OSHA lock-out/tag-out procedures. Disconnect and tag all electrical and/or other power sources to prevent an unplanned or unexpected actuation of the lift.
7. Once inspection or work is complete, reverse steps 1-6 above to raise the lift off the maintenance devices and place the devices back into their designated storage positions.



DANGER !

HIGH VOLTAGE!! – Disconnect and/or lock out the electrical supply to the power unit per OSHA Lock-Out, Tag-Out procedures prior to any installation or maintenance being performed.

LIFT BLOCKING INSTRUCTIONS

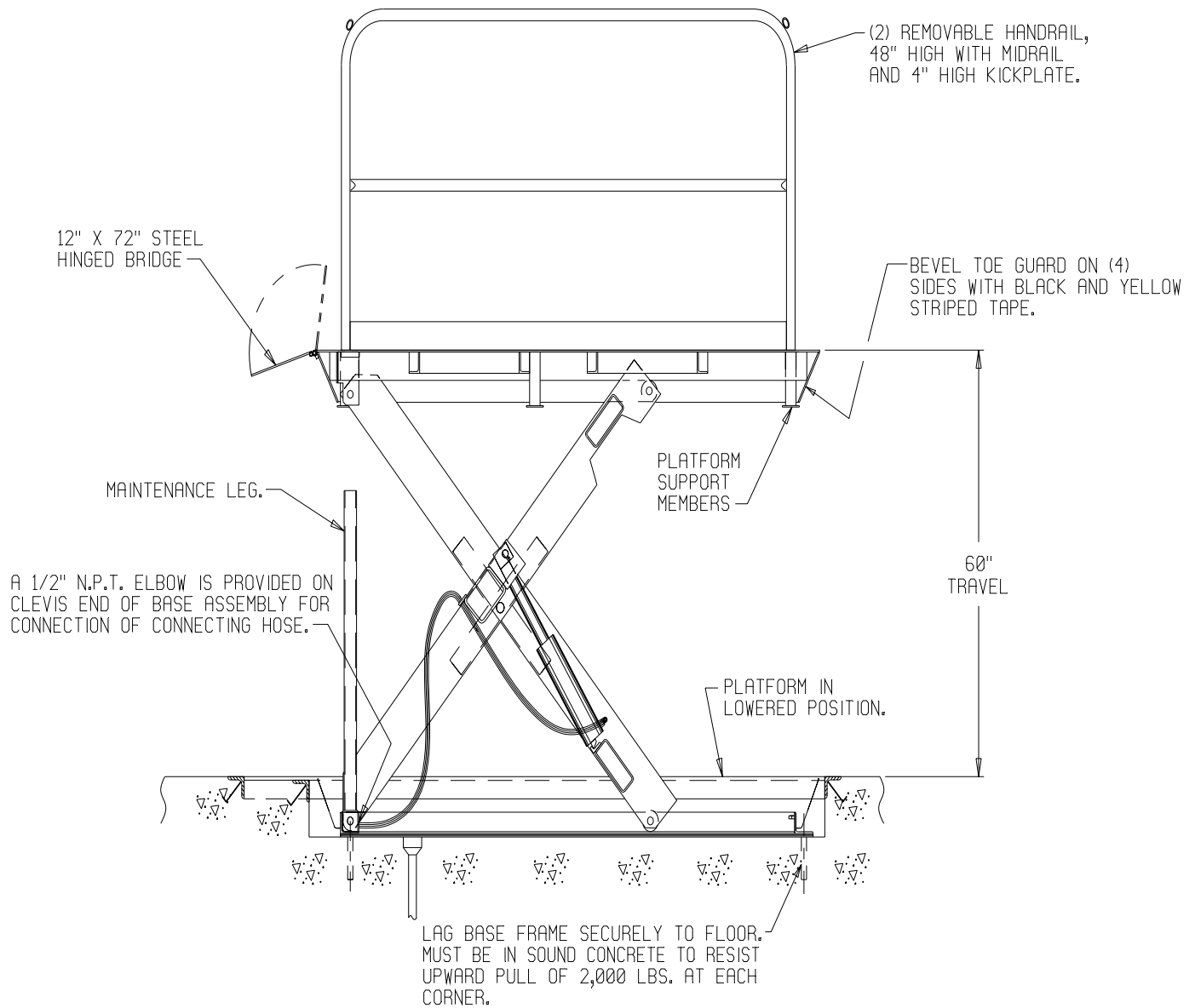


Figure 10 Maintenance Leg

INSTALLATION INSTRUCTIONS



WARNING!

Before installing lift, read & follow the recommended safety practices in the Safety Practices section. Failure to follow these safety practices could result in death or serious injury

PIT INSTALLATION



DANGER!

Do not install the lift in a pit unless it has a bevel toe guard or other approved toe protection. A shear point can exist which can cause severe injury to the foot.

Lift platforms traveling below floor levels may create openings, and the shape of the load and how the load is arranged on the lift may create a toe hazard as the load passes the top edge of the pit. Both situations may require guarding in accordance with Federal Regulations. Any such guarding must be installed prior to operating the lift.

Pit Dimensions

1. The pit in which the lift is installed is the responsibility of the contractor or owner.
2. The overall length and width should be 2" minimum longer and wider than the lift platform. Depth should be the lowered height plus 1/2".
3. Check the chase entrance into the pit. The diameter should be 3" (Figure 11).



DANGER!

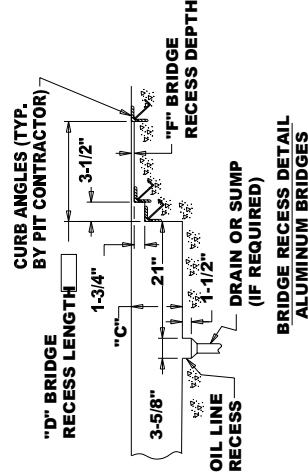
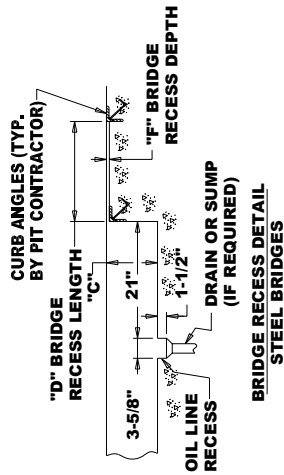
Do not work under lift without Maintenance Device! To avoid personal injury, NEVER go under the lift platform until the load is removed and the scissors mechanism is securely blocked in the open position and the appropriate OSHA lock-out/tag-out procedure is followed. See "Lift Blocking Instructions" section.

INSTALLATION INSTRUCTIONS

82600431

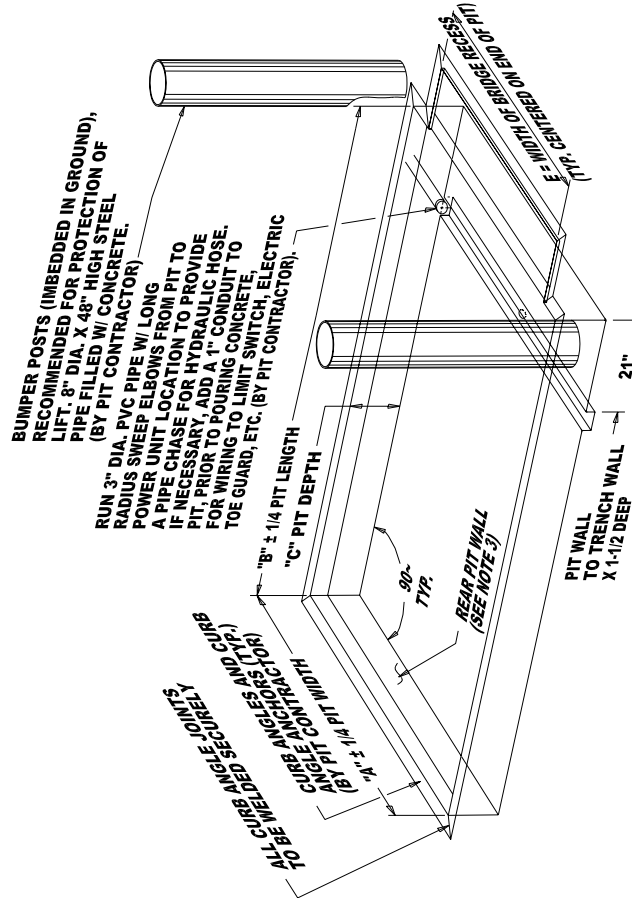
MODEL	PLATFORM	"A" PIT WIDTH	"B" PIT LENGTH w/BRIDGE	"B" PIT LENGTH w/o BRIDGE	"C" PIT DEPTH
PLT-C PLT-6050 PLT-6060	71-1/2" x 96"	73-1/2"	98-1/2"	98"	8-1/2"
PLT-6050A PLT-6060A	96" x 96"	98"	98-1/2"	98"	8-1/2"
PLT-6050S PLT-6060S	72" x 120"	74"	122-1/2"	122"	8-1/2"
PLT-6050B PLT-6060B	84" x 120"	86"	122-1/2"	122"	8-1/2"
PLT-6070 PLT-6080 PLT-60100	72" x 100"	74"	102-1/2"	102"	12-1/2"
PLT-6070A PLT-6080A PLT-60100A	96" x 100"	98"	102-1/2"	102"	12-1/2"
PLT-6070S PLT-6080S PLT-60100S	72" x 120"	74"	122-1/2"	122"	12-1/2"
PLT-6070B PLT-6080B PLT-60100B	84" x 120"	86"	122-1/2"	122"	12-1/2"

D = BRIDGE RECESS LENGTH = BRIDGE LENGTH
E = BRIDGE RECESS WIDTH = BRIDGE WIDTH + 2"
F = BRIDGE RECESS DEPTH = BRIDGE THICKNESS + 1/4"



NOTES:

1. ALL CURB ANGLES, PIT WORK, ELECTRICAL WIRING, ETC. TO BE BY OTHERS.
2. LOCATION OF BASE FRAME MOUNTING HOLES DETERMINED WITH SELECTION OF LIFT. ANCHORS TO BE IN SOUND CONCRETE AND RESIST UPWARD PULL OF 2,000 LBS. IN EACH CORNER.
3. ALL PIT WALLS TO BE PLUMB. REVERSE SLOPE OF 1/4" IS PERMISSIBLE.



PLT - 4-SIDED PIT DETAIL

Autoquip®

AUTOQUIP CORP.
1058 W. INDUSTRIAL AVE.
GUTHRIE, OK 73044-1058
888-811-9876 WWW.AUTOQUIP.COM

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2002

PROPOSAL DRAWING
QUOTE NO. _____
82600431

REV. 1, 3-12-02

Figure 11 Pit Drawing

INSTALLATION INSTRUCTIONS

Remote Power Unit Installation

1. The power unit is to be located in an area protected from the elements and should be installed prior to the lift to facilitate lift operation during installation into the pit.
2. The power unit can be wall mounted with the optional wall mount brackets.
3. The electrical work is to be done in accordance with local codes by a qualified electrician. See the "Maintenance" section for the standard wiring diagram.
4. If permanent electrical work is not complete, some means of temporary power with an on/off device for the motor will be required.
5. Fill the reservoir with oil per instructions in the "Maintenance" section.

Lift Installation



CAUTION!

Precautions should be taken to prevent the introduction of contaminants such as dirt or other foreign material into the system through open fittings, pipes or disassembled components. Contamination will ruin the hydraulic system.

1. Make temporary hose connections with high-pressure hose (see chart below) to allow the lift to be operated when it is set in the pit.

Hydraulic Piping/Hose Size

Up to 25 feet	1/2" ID
26 feet to 50 feet	3/4" ID
Over 50 feet	1" ID

2. Using 3/4" 10 UNC eyebolts and a chain spreader, place the lift into the pit as illustrated in Figure 12.
3. Remove the shipping bolt and eye bolts from the lift.
CAUTION: Failing to remove the shipping bolts before operation will cause permanent damage to the lift.

INSTALLATION INSTRUCTIONS

A 1/2" N.P.T. FEMALE FITTING IS PROVIDED ON CLEVIS END OF BASE ASSEMBLY FOR CONNECTION OF CONNECTING HOSE.

(2) 3/4"-10 UNC LIFTING EYES (BY INSTALLER). TO FIT IN TAPPED HOLES IN PLATFORM.

LIFTING CHAIN W/ SPREADER BAR (BY INSTALLER)

(2) REMOVABLE HANDRAIL, 42" HIGH W/ MIDRAIL AND 4" HIGH KICKPLATE.

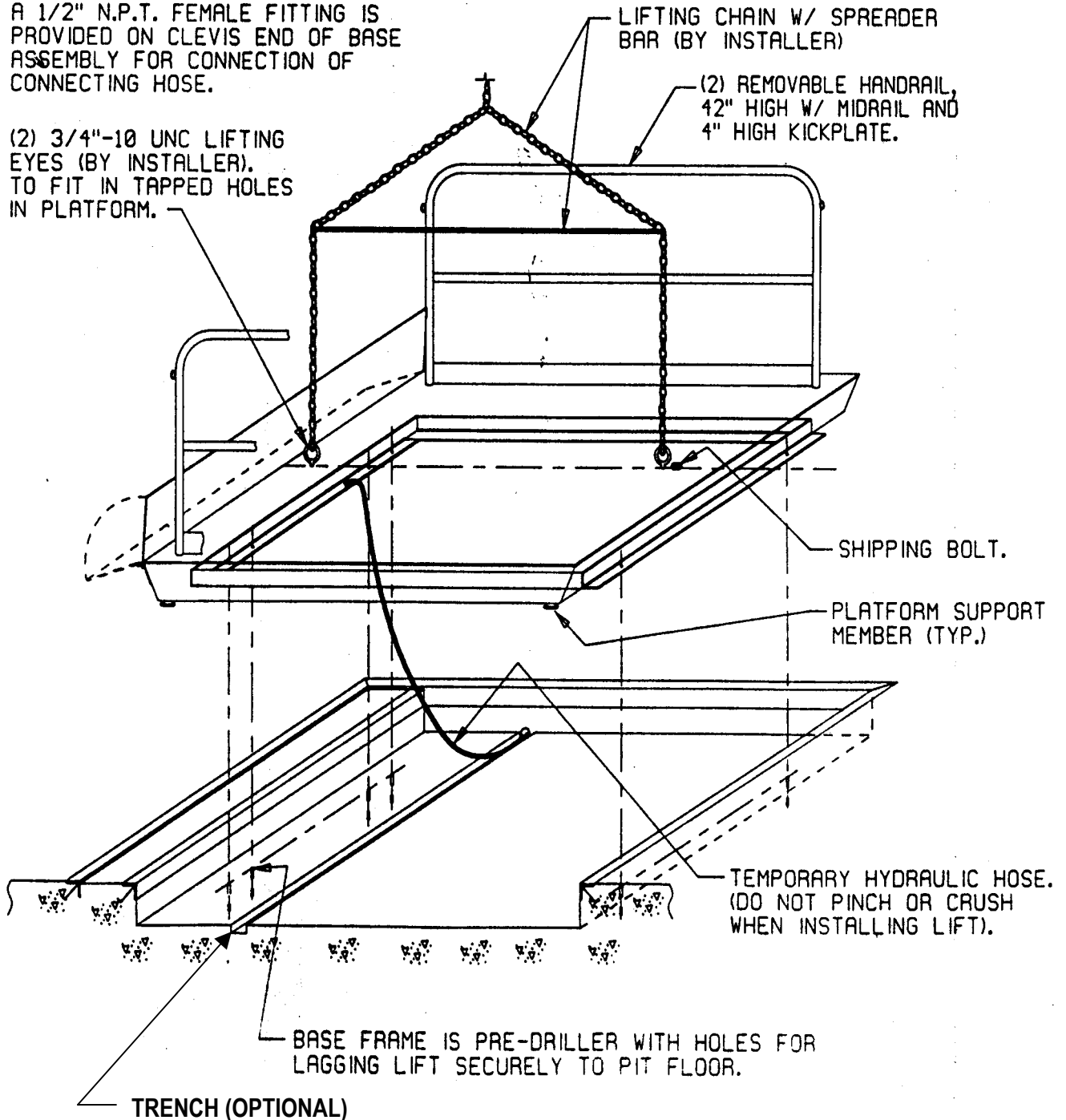


Figure 12 Lifting and Installation

INSTALLATION INSTRUCTIONS

Leveling to Grade

1. The platform top should be solid and flush with the pit curb angles. The pit depth includes 1/2" added to the lowered height of the lift for leveling purposes (see Figure 11).
2. Fully lower the lift platform into the pit and check for proper height.
3. Shims and/or grout must be placed under the entire base frame assembly and the platform support members to support the platform top at grade level. DO NOT "spot" shim! Shims and/or grout must be able to support the lift base frame while loaded at full rated lifting capacity and rollover load.

Starting Up and Lagging Down

1. Check the routing of the temporary hydraulic lines to assure that the hose is clear of legs, base frame, and platform when lift is in the lowered position.
2. Make positioning adjustments of the lift to align the platform with a one-inch clearance around the edges of the pit.
3. Make temporary electrical connections and permanent hydraulic connections (refer to **Hydraulic Piping/Hose Size** chart above). The female end connection on the lift base frame is 1/2" NPT.
4. In order to run hose to the lift cylinders from a remote power unit without having to route the hose under the base frame, all 8" lowered height PLT models have been provided with the necessary fittings to do so. Simply thread one end of the ship-loose, high pressure pipe nipple to the 1/2" NPT Tee located in the base frame, and thread the ship-loose, high-pressure hydraulic elbow fitting to the other end of the nipple and through the notched area of the platform bevel toe guards (refer to Figures 13 and 14). The 1/2" NPT pipe plug may have to be relocated as shown. **NOTE:** Use pipe dope at all connections – DO NOT USE TEFLON TAPE.
5. Raise the lift approximately one foot using the "UP" button (**Caution:** Do not raise the lift to its full travel until all the air has been bled from the system. It is very difficult to lower the lift if the velocity fuses engage while the lift is fully raised). Then lower the lift back to fully collapse, holding the "DOWN" button for approximately 30 seconds. Repeat this process five to seven times to bleed any air out of the hydraulic system while confirming that the alignment of the lift in the pit is acceptable.

INSTALLATION INSTRUCTIONS

6. Raise the platform and install the maintenance leg (see “Lift Blocking Instructions” section).
7. Lag down the base frame in the holes provided. Lag bolts should be able to withstand 2000 lbs. minimum upward pull at each corner.
8. Replace any electrical connections with permanent.

Final Preparation

1. Place the handrails in the platform sockets as shown in Figure 12.
2. Be sure the maintenance leg is securely in its storage position.
3. Check oil level of reservoir with the lift in the fully lowered position. Oil should be 1” to 1-1/2” below the top of the reservoir tank. (See the “Maintenance” section for oil specifications.)
4. Make sure that all applicable labels are in place in accordance to Figure 1.



WARNING!

All DANGER, WARNING, and CAUTION labels and informational decals and plates must be intact and in place on the lift. Contact an Autoquip representative if labels are missing or damaged.

Clean Up

1. Clean up any spilled oil and debris from the area. A clean installation makes a good impression and creates a much safer environment!
2. Touch-up paint is available by request from *Autoquip* for repair of damaged paint surfaces.

INSTALLATION INSTRUCTIONS

FLOOR INSTALLATION

Floor installation procedures are the same as for pit installation instructions. The following considerations must be made for floor installation:

1. The surface area where the lift will be set must be flat and level and be of sound concrete of sufficient thickness to support the lift while loaded at full capacity.
2. In order to run hose to the lift cylinders from a remote power unit without having to route the hose under the base frame, all 8" lowered height PLT models have been provided with the necessary fittings to do so. Simply thread one end of the ship-loose, high pressure pipe nipple to the 1/2" NPT Tee located in the base frame, and thread the ship-loose, high-pressure hydraulic elbow fitting to the other end of the nipple and through the notched area of the platform bevel toe guards (refer to Figures 13 and 14). The 1/2" NPT pipe plug may have to be relocated as shown. Hydraulic lines must be protected or placed in a way that they are free from possible damage.
NOTE: Use pipe dope at all connections – DO NOT USE TEFLON TAPE.
3. Bumper posts are recommended to protect the lift from horizontal forces when in the raised and lowered position.
4. The base of the lift must be lagged down in the holes provided. Lag bolts should be able to withstand 2000 lbs. minimum upward pull at each corner.
5. Shims and/or grout may be required to insure support of the entire base frame and platform support members. DO NOT "spot" shim! Shims and/or grout must be able to support the lift while loaded at full capacity.
6. Optional floor ramps are available. Consult a local Autoquip dealer.



Figure 13 Pipe Nipple Installation for 8" Lowered Height PLT

INSTALLATION INSTRUCTIONS

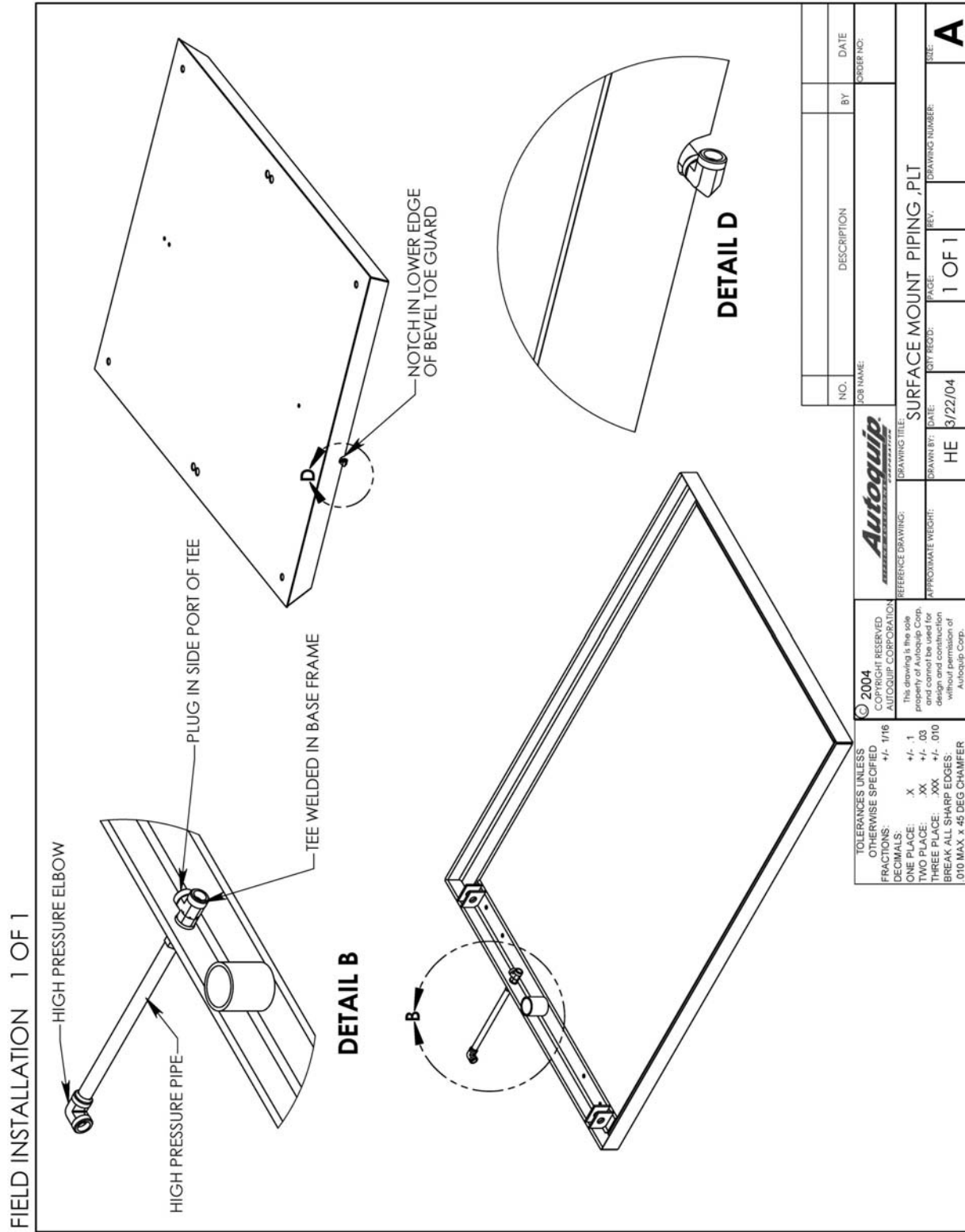
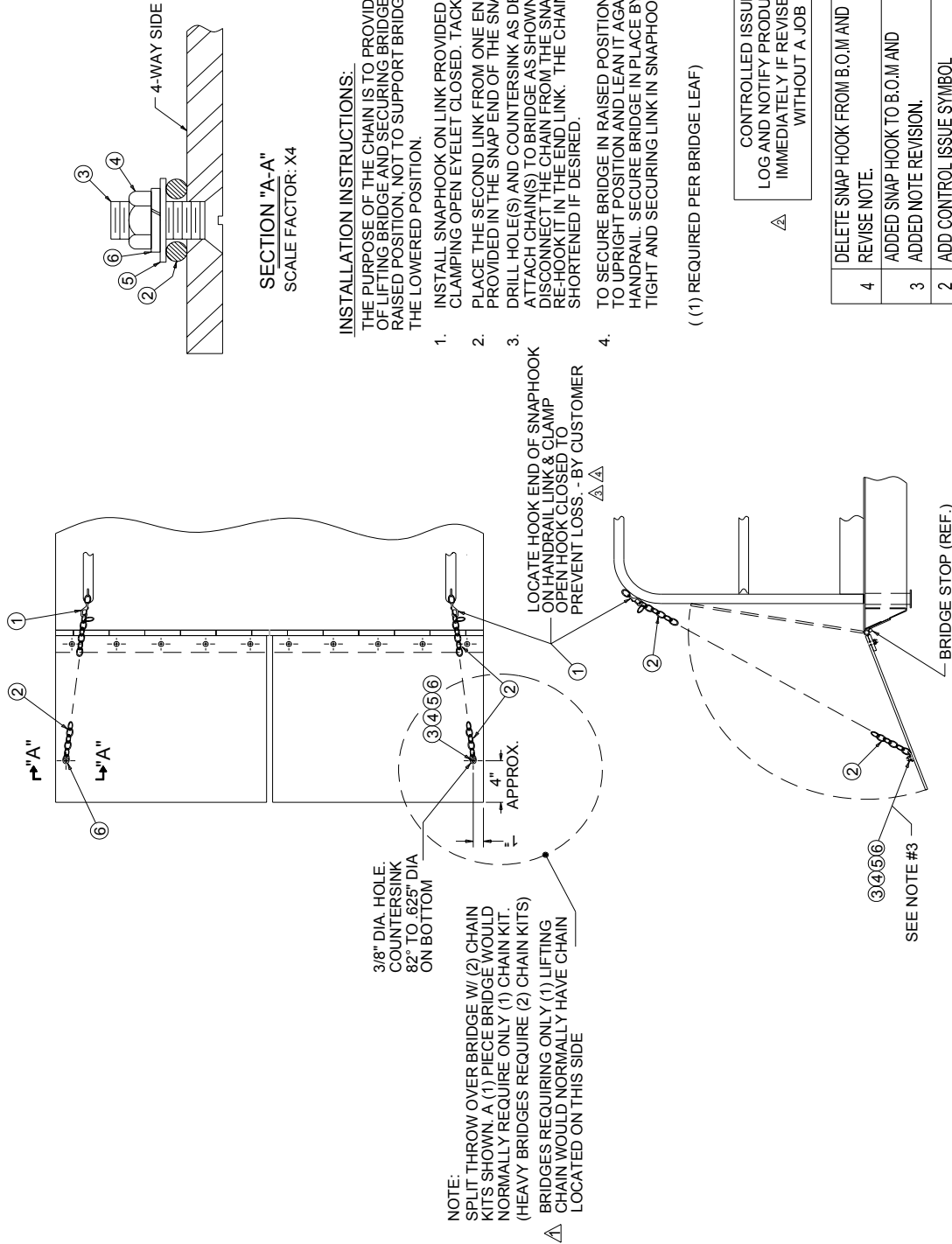


Figure 14 Pipe Nipple Installation for 8" Lowered Height PLT (cont'd)

INSTALLATION INSTRUCTIONS



INSTALLATION INSTRUCTIONS:

THE PURPOSE OF THE CHAIN IS TO PROVIDE A MEANS OF LIFTING BRIDGE AND SECURING BRIDGE IN THE RAISED POSITION, NOT TO SUPPORT BRIDGE IN THE LOWERD POSITION.

1. INSTALL SNAPHOOK ON LINK PROVIDED ON HANDRAIL BY CLAMPING OPEN EYELET CLOSED. TACK WELD IF DESIRED.
2. PLACE THE SECOND LINK FROM ONE END OF CHAIN PROVIDED IN THE SNAP END OF THE SNAPHOOK.
3. DRILL HOLE(S) AND COUNTERSINK AS DESCRIBED. ATTACH CHAIN(S) TO BRIDGE AS SHOWN IN SECTION "A-A". DISCONNECT THE CHAIN FROM THE SNAP HOOK AND RE-HOOK IT IN THE END LINK. THE CHAIN CAN BE SHORTENED IF DESIRED.
4. TO SECURE BRIDGE IN RAISED POSITION, PULL BRIDGE TO UPRIGHT POSITION AND LEAN IT AGAINST THE HANDRAIL. SECURE BRIDGE IN PLACE BY PULLING CHAIN TIGHT AND SECURING LINK IN SNAPHOOK.

((1) REQUIRED PER BRIDGE LEAF)

CONTROLLED ISSUE DRAWING:
LOG AND NOTIFY PRODUCTION SERVICES IMMEDIATELY IF REVISED OR IF ISSUED WITHOUT A JOB NUMBER.

4	DELETE SNAP HOOK FROM B.O.M AND REVISE NOTE.	MS	5/26/04
3	ADDED SNAP HOOK TO B.O.M AND ADDED NOTE REVISION.	MS	5/14/04
2	ADD CONTROL ISSUE SYMBOL	TC	2/27/96
1	ADD NOTE PER ECN # 000488	DWL	4/9/96
REV	DESCRIPTION	BY	DATE
JOB NAME: ORDER NO:			

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REFERENCE DRAWING: DRAWING TITLE:

ALUM TOB LIFTING/HOLDING CHAIN KIT

APPROXIMATE WEIGHT: <2T
DRAIN BY: DWL
DATE: 1/16/95
QTY REQ'D: 1 OF 1
PAGE: 4
REV. 4
DRAWING NUMBER: 531-0087-0
SIZE: A

Figure 15 Bridge Installation, Aluminum

INSTALLATION INSTRUCTIONS

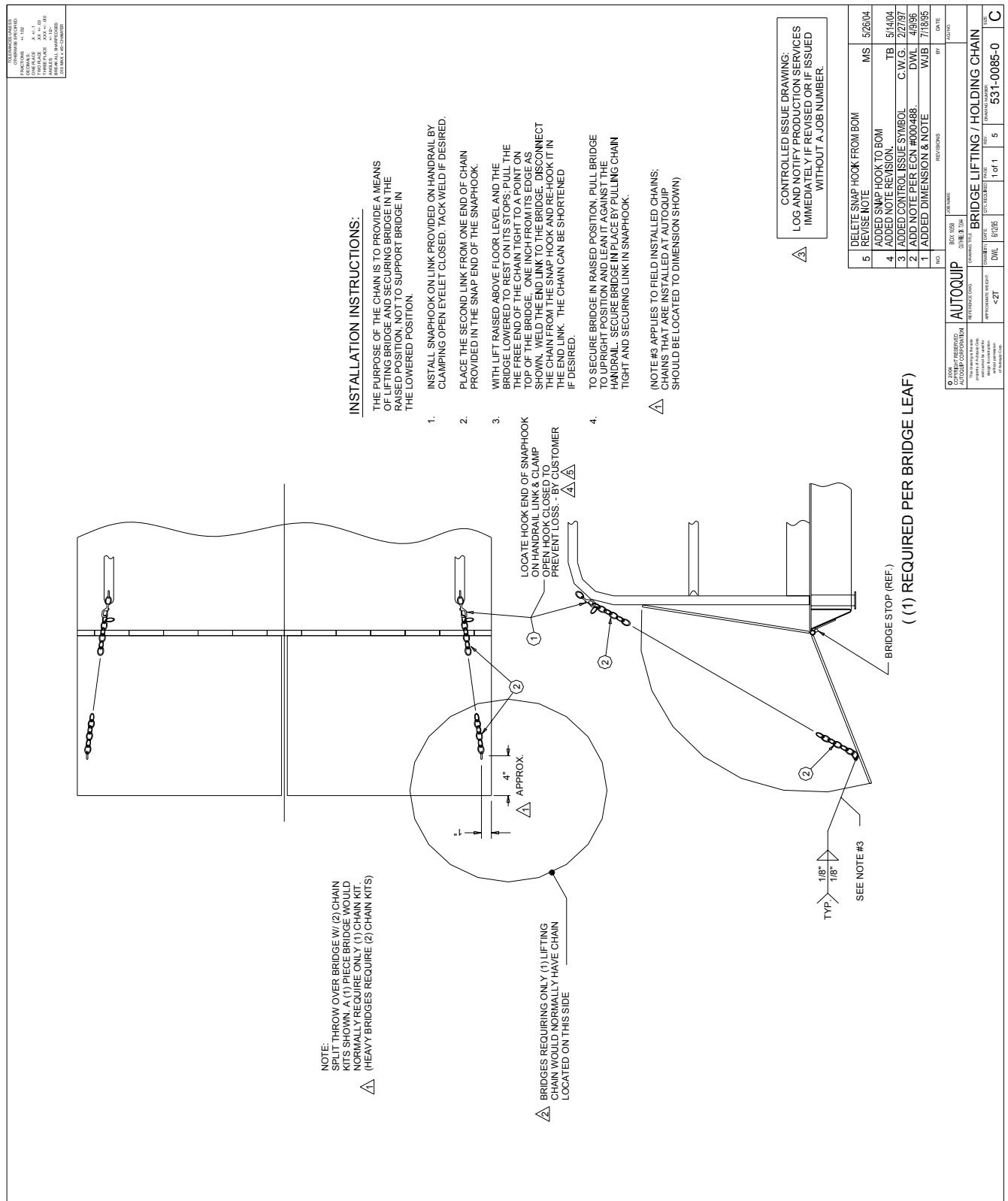


Figure 16 Bridge Installation, Steel

INSTALLATION INSTRUCTIONS

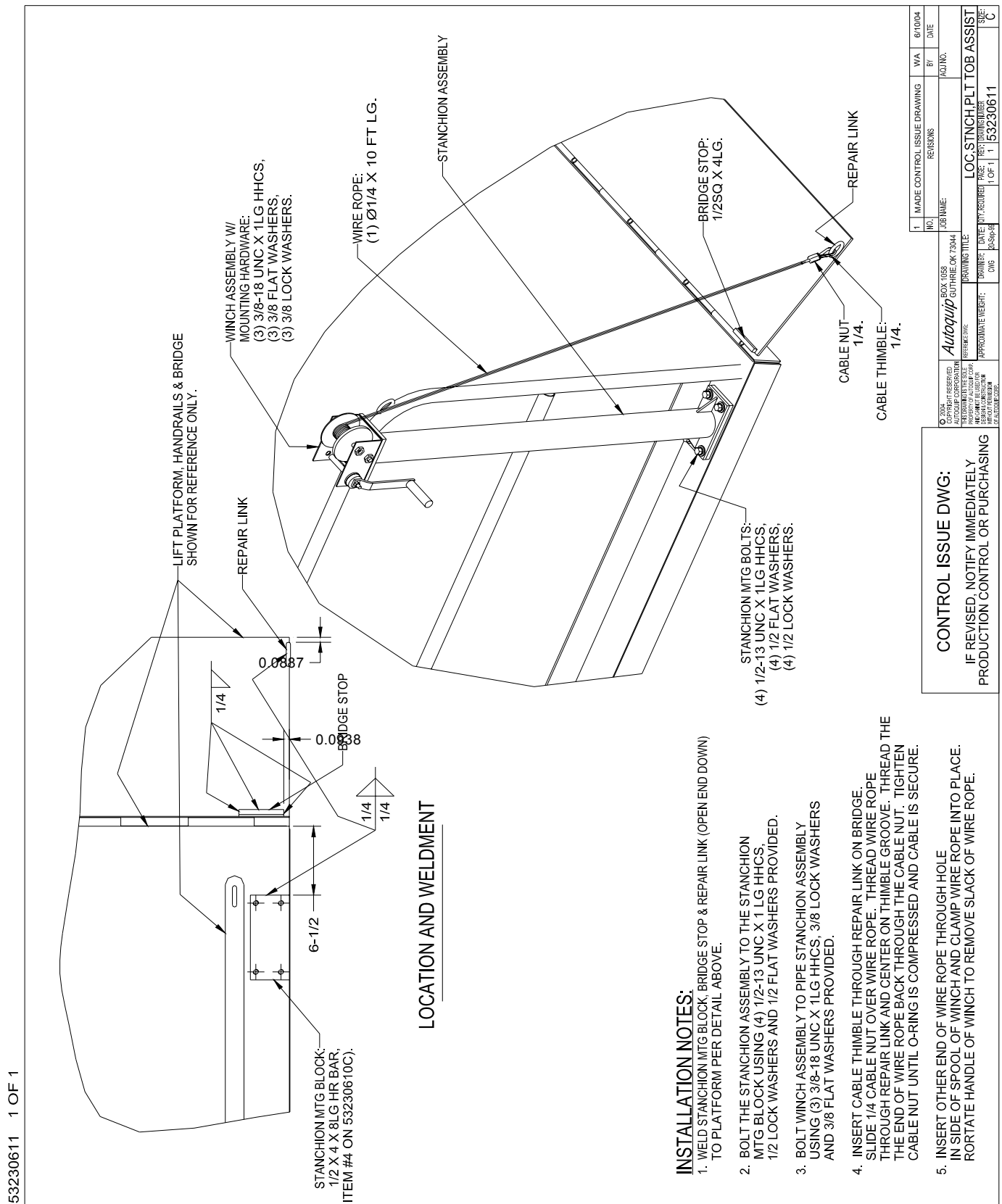


Figure 17 Manual Bridge Winch Installation

INSTALLATION INSTRUCTIONS

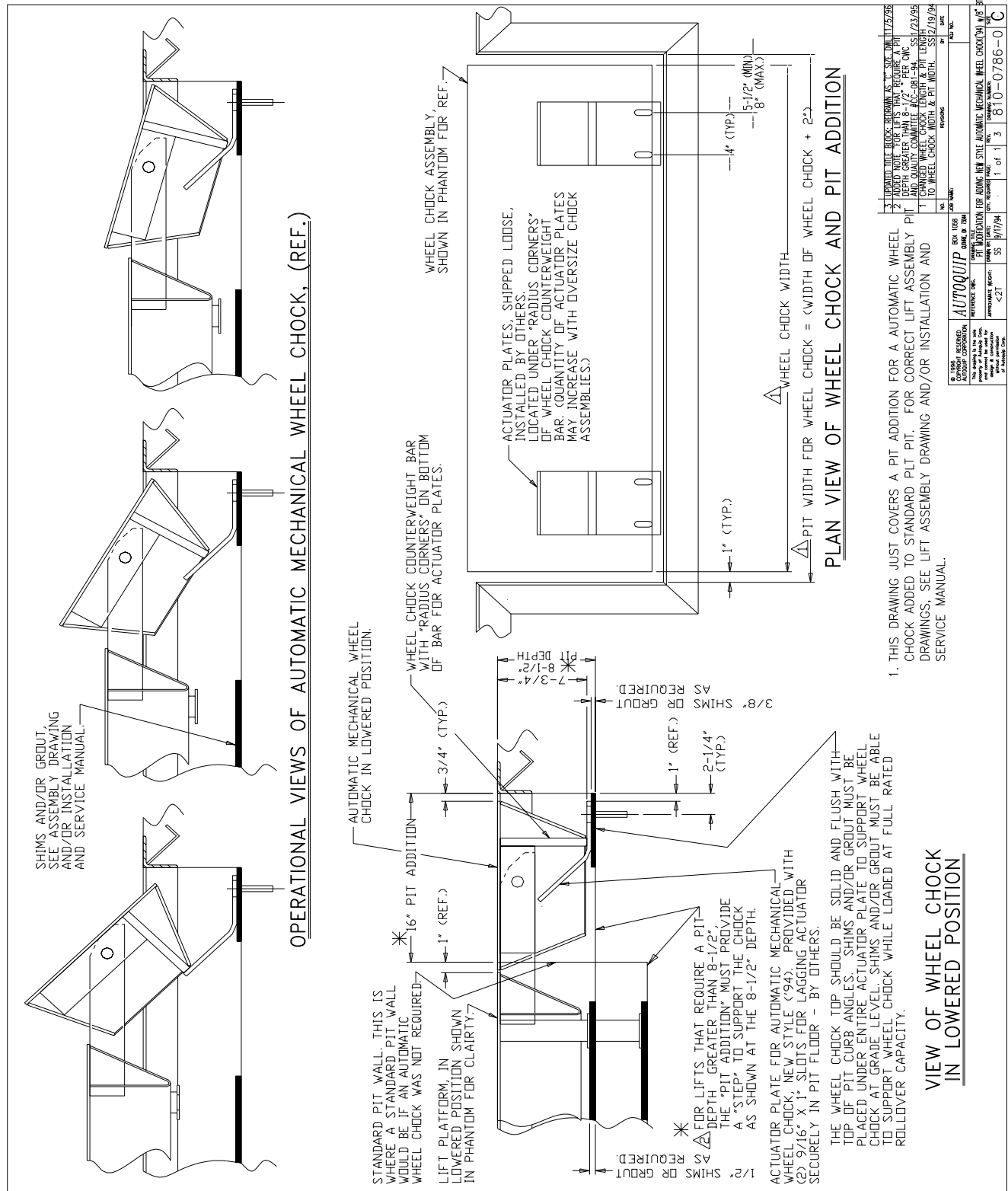


Figure 18 Pit Modification and Installation For Mechanical Wheel Chock

INSTALLATION INSTRUCTIONS

PROCEDURE FOR A LIFT ORDERED WITH AN ACCORDION SKIRT

1. Position the platform in the raised position. Install the maintenance locks (see “Lift Blocking Instructions” section). Position the accordion with the weight rod pocket at the bottom and the mounting collar at the top. The breathable material when provided must be positioned at the top of the skirt with the mounting collar.
2. Slip the skirt over the end of the platform. Turn the skirt as required to slide over the other end of the platform and leg assembly. The skirt should be in position under the platform while enveloping the base assembly.
3. See Figure 19 and select the correct mounting configuration (Number 1, 2, or 3).

Figure #1: Mounting an Accordion Skirt Onto the Platform Side

Raise one side of the skirt along with a skirt -mounting bar (1/8" x 1") to (1) side of the platform. When possible, center the skirt-mounting collar and skirt-mounting bar (1/8" x 1") on the platform side. Align the pre-drilled holes in the side of the platform with the skirt-mounting bar holes and punch holes in the skirt-mounting collar. Push a nylon drive rivet through each hole in the skirt-mounting bar. Hammer the aluminum pin into the rivet until flush with the rivet head. Repeat mounting process for the remaining sides of the accordion skirt.

Figure #2: Mounting an Accordion Skirt Underneath the Platform

Raise one side of the skirt along with a skirt-mounting bar (1/8" x 1") to the underside of the platform skirt support bar. When possible, center the skirt mounting collar and the skirt-mounting bar (1/8" x 1") on the platform support bar. Align the pre-drilled holes in the skirt support bar (picture frame) with the skirt -mounting bar holes and punch holes in the skirt-mounting collar. Push a nylon drive rivet through each hole in the skirt-mounting bar. Hammer the aluminum pin into the rivet until flush with the rivet head. Repeat mounting process for the remaining sides of the accordion skirt.

Figure #3: Mounting an Accordion Skirt Onto the Bevel Toe Guard

Raise one side of the skirt along with a skirt-mounting bar (1/8" x 1") to the side of the bevel toe guard. When possible, center the skirt mounting collar and the skirt-mounting bar (1/8" x 1") on the platform bevel toe guard. Align the pre-drilled holes in the bevel toe guard with the skirt-mounting bar holes and punch holes in the skirt-mounting collar. Push a nylon drive rivet through each hole in the skirt-mounting bar. Hammer the aluminum pin into the rivet until flush with the rivet head. Repeat mounting process for the remaining sides of the accordion skirt.

4. Install weight rods into the weight rod pockets at the bottom of the accordion skirt. Install the spring tempered wire rods into the pocket of black convolutions.

INSTALLATION INSTRUCTIONS

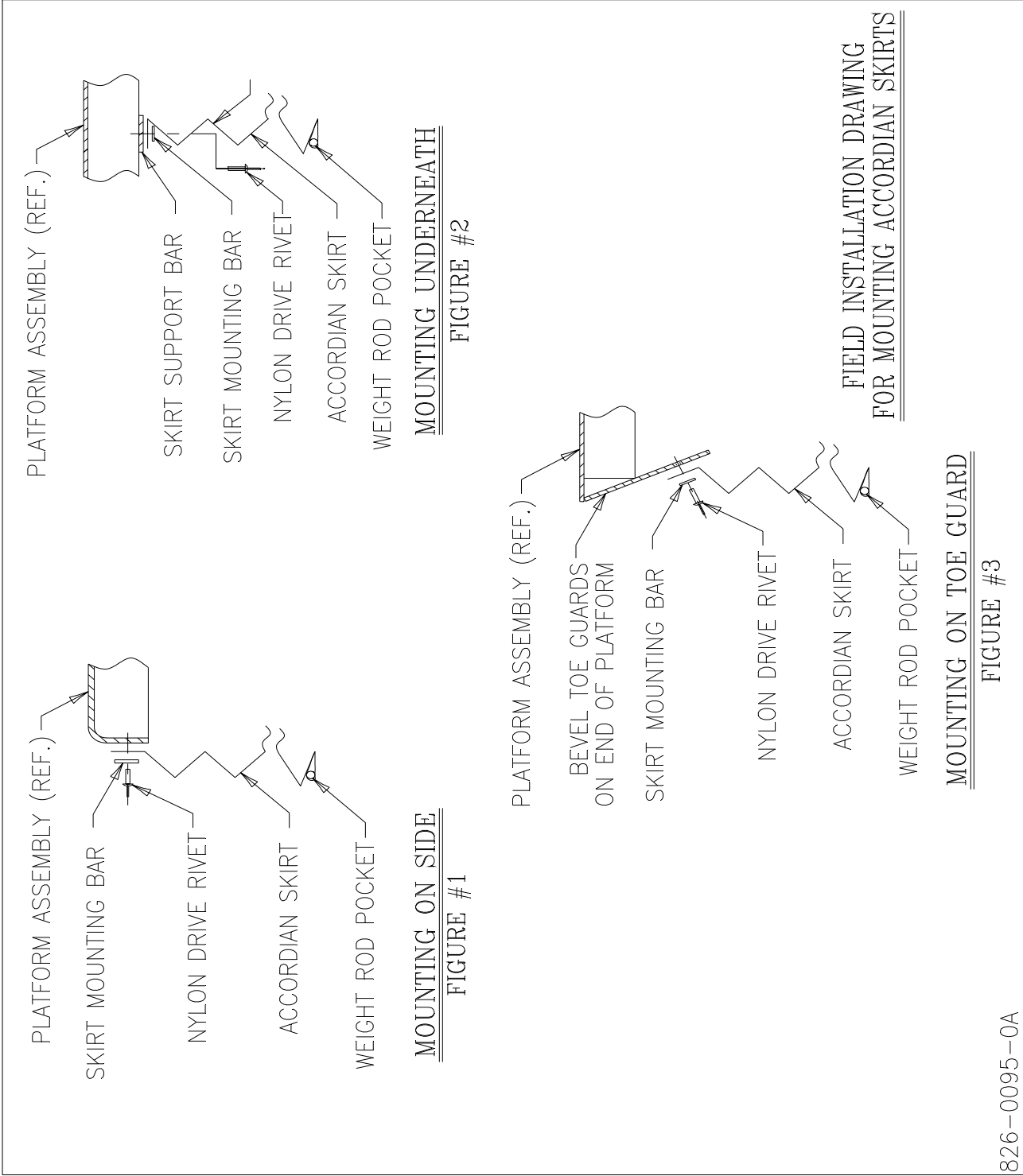


Figure 19 Field Installation Diagram for Mounting Accordion Skirts

OPERATING INSTRUCTIONS



CAUTION !

Only trained and qualified personnel should operate this equipment.

1. Scissors lifts have maximum lifting capacity ratings (see "Specifications" section). The safety relief valve has been factory set to open at a pressure slightly above the rated load capacity and allows the oil to bypass into the reservoir to prevent damage to the lift and its hydraulic power unit. **The safety relief valve should not be adjusted for any reason as it could cause the motor to prematurely burn out.** Applying loads exceeding the rated capacity of the lift may result in excessive wear and damage to the lift.
2. This type of lift is designed primarily for dock applications and is typically furnished with constant pressure pushbutton controls. Actuating the "UP" button will cause oil to enter the cylinders and the lift will rise.
3. When the desired height or upward travel of the platform is attained, removing pressure from the switch deactivates the "UP" circuit button. The oil stops flowing and the upward movement will stop.
4. To lower the lift, activate the "DOWN" button. Opening the down control valve allows the oil in the cylinders to flow through the down valve at a controlled rate and return oil to the reservoir.
5. When the desired height or downward travel of the platform is attained, removing the operator's foot or hand from the switch deactivates the "DOWN" circuit. The oil stops flowing from the cylinders and the downward movement will stop.



CAUTION !

Whenever raising or lowering the lift, personnel should maintain a safe operating distance of at least 36" to avoid personal injury.

CAUTION!

Do not operate the power unit on relief for more than a few seconds. When on relief, the valve will make an audible squealing sound.

ROUTINE MAINTENANCE



WARNING!

Before maintaining lift, read & follow the recommended safety practices in the Safety Practices section. Failure to follow these safety practices could result in death or serious injury.



DANGER!

Do not work under lift without Maintenance Device! To avoid personal injury, NEVER go under the lift platform until the load is removed and the scissors mechanism is securely blocked in the open position and the appropriate OSHA lock-out/tag-out procedure is followed . See "Lift Blocking Instructions" section

Normally scissors lifts will require very little maintenance. However, a routine maintenance program could prevent costly replacement of parts and/or downtime.

MONTHLY INSPECTION:

1. Do not use worn or damaged parts or equipment. All worn or damaged parts should be replaced with authorized Autoquip parts only.
2. Check oil level (see oil recommendations in this section) and add appropriate oil when necessary.
3. Check for any visible leaks. Correct as necessary.
4. Check any unusual noise when it occurs. Determine the source and correct as necessary.
5. Check the snap rings at all rollers, if not in place or secure, replace or repair immediately.
6. Check all rollers for signs of wear. Replace as necessary. Do not grease roller or axles; they have lifetime-lubricated bearings.
7. Check all wiring for looseness or wear. Repair at once.
8. Check for damage to all hinged, throw-over bridges. Any lift which has a bridge damaged to the point of hanging more than 30 degrees below horizontal is in violation of safety standards as set forth in ANSI MH29.1 and MUST be taken out of service until the bridge is repaired or replaced.

ROUTINE MAINTENANCE

OIL REQUIREMENTS:

Change oil yearly, or more frequently if it darkens materially or feels gummy or gritty. Use detergent motor oils only. Do not use hydraulic-jack oil, hydraulic fluids, brake fluids, or automatic transmission fluid.

Oil Viscosity Recommendations

Environment (Ambient Temperatures)	Recommended Oil
Indoor location, variable temperatures (30 - 100° F)	10W30 or 10W40 Multiviscosity motor oil
Indoor location, consistent Temperatures (70° F)	SAE-20W motor oil
Outdoor location, (-10 - 100° F)	SAE 5W30 Multiviscosity motor oil
Cold-storage warehouse (10 - 40° F)	5W30 Multiviscosity motor oil
Freezer (-40° F to 0° F)	Consult Factory

OIL CAPACITY:

Reservoir capacity for the steel “vertical” tank is approximately 11 gallons. The reservoir capacity for “contractor” (polyethylene) tank is approximately five gallons.

The oil level in the reservoir should be 1” to 1 ½” below the top of the reservoir with the lift in the fully lowered position.

PIPE THREAD SEALANT

Loctite PST #567 pipe thread sealant or equivalent is recommended. **Do not use Teflon tape.** Tape fragments can cause malfunctioning of the hydraulic system.

GENERAL MAINTENANCE



WARNING!

Before maintaining lift, read & follow the recommended safety practices in the Safety Practices section. Failure to follow these safety practices could result in death or serious injury.

1. Change oil once a year or when it materially darkens or feels gritty. Also, check oil for the presence of water (oil will turn milky in color.)
2. NEVER TRY TO DISASSEMBLE OR REPAIR A PUMP IN THE FIELD. These pumps are high-precision devices requiring extreme precision in fit-up. When one is damaged, there is seldom anything that can be repaired in the field. It is also more economical to replace a pump than to refit old parts with new parts.
3. The pin, or roller bushing should be replaced whenever excessive wear is detected. The rollers are furnished with the pressed-in bushing as a unit part.



DANGER!

Do not work under lift without Maintenance Device! To avoid personal injury, NEVER go under the lift platform until the load is removed and the scissors mechanism is securely blocked in the open position and the appropriate OSHA lock-out/tag-out procedure is followed . See "Lift Blocking Instructions" section



DANGER !

Failure to relieve lift table system pressure could result in the sudden and unexpected release of pressure during maintenance and/or repair of the lift and result in severe injury to personnel and/or damage to the lift.

GENERAL MAINTENANCE

POWER UNIT

A. Vertical Power Unit



DANGER !

HIGH VOLTAGE!! – Disconnect and/or lock out the electrical supply to the power unit per OSHA Lock-Out, Tag-Out procedures prior to any installation or maintenance being performed.

1. The “vertical” unit utilizes a heavy duty 5 HP/208, 230, or 460 Volts/60 hertz/3 phase motor coupled to a high-pressure positive displacement gear pump, and *Autoquip Corporation’s* patented Deltatrol valve assembly. It is also available with a 5 HP/115 or 230 Volts/60 hertz/single-phase motor as an option.
2. The following should be referenced in connecting the standard heavy-duty motors to power sources. Remember that heavy wire must be used all the way to the power source.

Power Unit	115 Volts	208 Volts	230 Volts	460 Volts
Standard Three Phase	N/A	16 AMPS	15.2 AMPS	7.6 AMPS
Standard Single Phase	58 AMPS	N/A	24.5 AMPS	N/A

NOTE: All amperage draws shown are full-load amperages.

B. Contractor Remote Power Unit



DANGER !

HIGH VOLTAGE!! – Disconnect and/or lock out the electrical supply to the power unit per OSHA Lock-Out, Tag-Out procedures prior to any installation or maintenance being performed.

1. The Contractor Power Unit utilizes a “Super-Torque” intermittent duty (one full lift cycle per four minute period) 5 HP/208, 230, or 460 Volts/60 hertz/3 phase motor driving a high pressure positive displacement pump assembly with internal relief check and dump valves.

GENERAL MAINTENANCE

2. Because *Autoquip* "Super-Torque" motors actually deliver substantially more horsepower than their nameplate rating, they must always be wired for heavier current-draw than standard motors of the same nameplate rating. However, because of the "Super-Torque" motor's starting efficiency and superior running characteristics, circuit components do not have to be as large as for standard motors of equal delivered horsepower.

The following chart should be referenced in connecting these motors to power sources, remembering that heavy wire must be used all the way to the power-source.

5 HP	208 Volts	230 Volts	460 volts
Full Load Amperages	15.8 AMPS	14.8 AMPS	7.4 AMPS

CYLINDER REMOVAL AND REPACKING (see figure 20)

1. Raise the lift to its full height and block securely. See "Lift Blocking Instructions".
2. Loosen and remove the cylinder hose at the hose union in the tee connection between the two cylinders. Place the open end of the hose in a container to receive oil spillage.
3. Remove the pin retaining screw in the cylinder clevis or pin retaining rings, and carefully tap out the clevis pin to avoid damaging the clevis pin bushings.
4. Remove the cylinder from the lift.



DANGER !

Failure to relieve lift table system pressure could result in the sudden and unexpected release of pressure during maintenance and/or repair of the lift and result in severe injury to personnel and/or damage to the lift.

GENERAL MAINTENANCE

5. Push the piston rod into the tube to eject as much oil as possible into a container.
6. Pull the rod out of the cylinder tube sufficiently to gain access to the face spanner wrench holes on the rod end of the cylinder. Do not allow oil or dirt to be pulled back into the hydraulic hose.
7. Using a face spanner wrench, turn the bearing assembly clockwise until the tip of the retainer appears in the slot in the outer surface of the cylinder tube.
8. Insert a small blade screwdriver under the tip of the retainer and turn the bearing assembly counter-clockwise until the retainer is free of the slot. **NOTE:** The wire retainer may be a cutting or puncturing hazard.
9. Pull the rod out of the tube slowly to remove the rod and bearing assembly. **NOTE:** Use caution to prevent surface damage to the rod. This could result in seal failure and/or leakage.
10. Inspect the bore of the tube. Hone if necessary to remove any surface imperfections in the bore. Flush thoroughly after honing to remove chips and grit.
11. Remove the piston lock nut and slide off the piston and bearing assembly. Take care to protect the rod surface from damage.
12. Install new packing and seals on the piston, rod, and bearing assembly. Inspect all grooves and seal surfaces for any imperfections and repair or replace as necessary.
13. Grease all seals and packing liberally and install the bearing assembly and the piston on the rod and torque the lock nut to 500 ft. lbs.
14. Install the rod into the tube using care not to damage any seals or packing
15. Align the retainer hole in the bearing assembly groove with the slot in the tube.
16. Insert the retainer hook end in the hole/slot and using a face spanner wrench, turn the bearing assembly clockwise until the retainer is completely inserted in the groove/slot in the tube.
17. Check the clevis pin bushings in the cylinder rod for wear and replace as necessary.

GENERAL MAINTENANCE

18. Install the assembled cylinder into the lift by carefully driving the clevis pin through the clevis and cylinder rod. Extreme care must be taken to prevent damage to the clevis in the bushings. Install the pin retaining screw with washers, engaging the slot in the pin, and torque to 25 ft. lbs. or the retaining rings and washers on the pin (cylinder rod may be extended by hand.)
19. Connect the cylinder hydraulic hose and the tee using the recommended sealant.
20. Check all pins and other mechanical as well as hydraulic components to assure that the assembly is complete and in good working order.
21. Turn the electrical supply back on and press the "UP" button on the controller to raise the lift. **NOTE:** 15 to 30 seconds time may elapse to fill the empty cylinders before movement is noted.
22. Remove and place the maintenance leg in its storage location, then press the "DOWN" button on the controller to cycle the lift to the fully lowered position. Hold the "DOWN" button 30 to 40 seconds to allow air in the cylinders to bleed back into the reservoir tank.
23. Cycle the lift 10 to 15 times and repeat the bleeding operation by holding the "DOWN" button for 30 to 40 seconds.
24. Check the oil level in the reservoir with the lift in the fully lowered position. Add as necessary (see "Routine Maintenance" for oil recommendations).
25. Clean the oil filler breather cap if it appears dirty.
26. Clean up any debris and or spilled oil from the area.

GENERAL MAINTENANCE

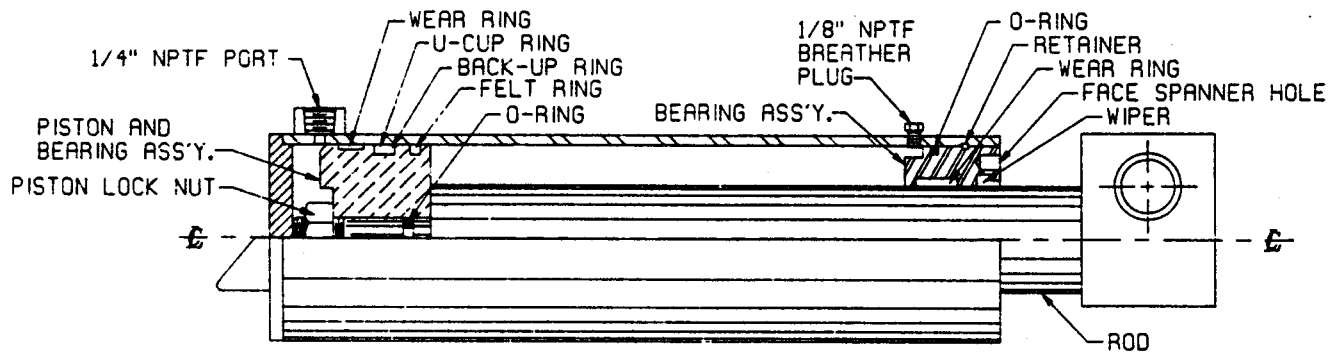


Figure 20 Hydraulic Cylinder

GENERAL MAINTENANCE

VELOCITY FUSE REPLACEMENT



DANGER!

Do not attempt to remove the velocity fuse until the lift is securely supported with the maintenance locking devices and all hydraulic pressure has been removed from the lifting cylinders and hydraulic hoses. Failure to follow these instructions could result in personal injury or death!

Never attempt to take a velocity fuse apart and repair it. These are precision devices that are factory assembled under exacting conditions. Velocity fuses should always be replaced.

1. The arrow on the exterior surface of the velocity fuse shows the direction of the restriction to the oil flow. The arrow should always point away from the cylinder.
2. **Do not use Teflon tape on the threaded connections of a velocity fuse.** Tape fragments can cause malfunctioning of the fuse.
3. Check all fitting connections for hydraulic leaks and tighten as necessary.

HOSE ORIENTATION

To prevent damage to the cylinder hose and possible failure of lift, it is necessary to establish a correct hose shape and pattern of movement as follows:

1. Raise the lift to its full height and block securely. See "Lift Blocking Instructions".
2. Install one end of the new hose to the cylinder elbow fitting.
3. Since the hose is fixed at both ends, it is possible to put a twist in the hose that will allow it to describe the same pattern each time the lift is operated. This twist will allow the hose to travel about half way between the cylinder on the right side and the inner leg on the right side.
4. Lower the lift carefully and check to see that the hose is free and clear of the cylinder and the inner leg assembly. If not, twist the hose in the direction necessary to clear it of any obstruction and then lock the swivel fitting securely.

GENERAL MAINTENANCE

ROCK SALT

It has been discovered that rock salt is being used to melt the ice and snow off of the platforms in the northern region and during the winter months. Rock salt will accelerate the deterioration of any paint. Therefore, *Autoquip* recommends the use of a synthetic "Ice Melt" product in lieu of rock salt.

Warranty on the paint finish will be denied when it is suspected that rock has been used. Please contact the Product Support Team at Autoquip at 1-888-811-9876 or 405-282-5200.

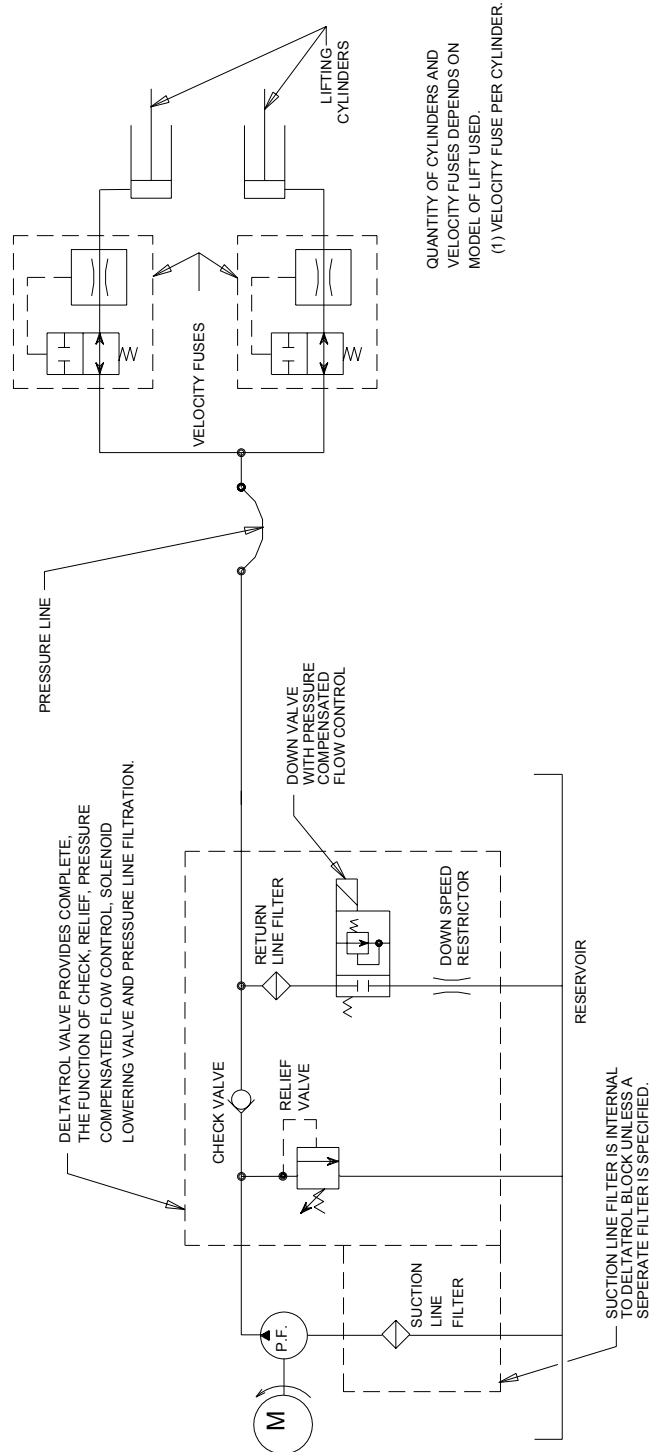


CAUTION !

Any lift which has a hinged throw-over bridge damaged to the point of hanging more than 30 degrees below horizontal is in violation of the safety standards set forth in ANSI MH29.1 and **MUST be taken out of service until the bridge is repaired or replaced. Failure to do so could result in severe personal injury or permanent damage to the lift.**

GENERAL MAINTENANCE

657-5000-1



1	REDRAWN IN AUTOCAD	JZ	10/11/01
REV	DESCRIPTION	BY	DATE
JOB NAME:			
ORDER NO:			

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DRAWING TITLE:
HYD SCH FOR SCISSOR LIFT W/ DELTROL

REFERENCE DRAWING:
657-5023-0

DRAWN BY:
WJB

DATE:
10/13/99

QTY REQD:
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PAGE:
1 OF 1

DRAWING NUMBER:
657-5000-1

SIZE:
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Figure 21 Hydraulic Schematic – “Vertical” Power Unit

GENERAL MAINTENANCE

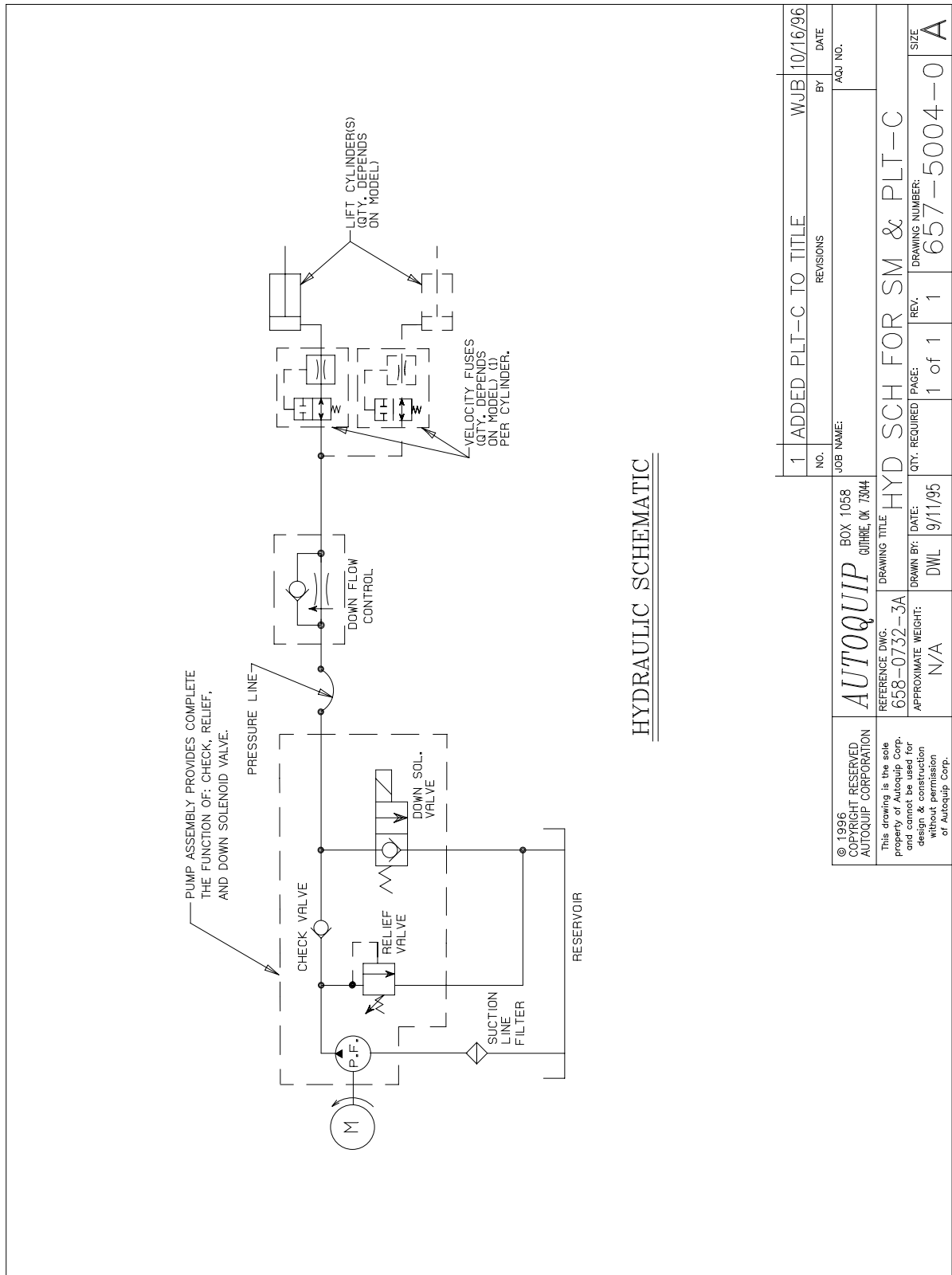


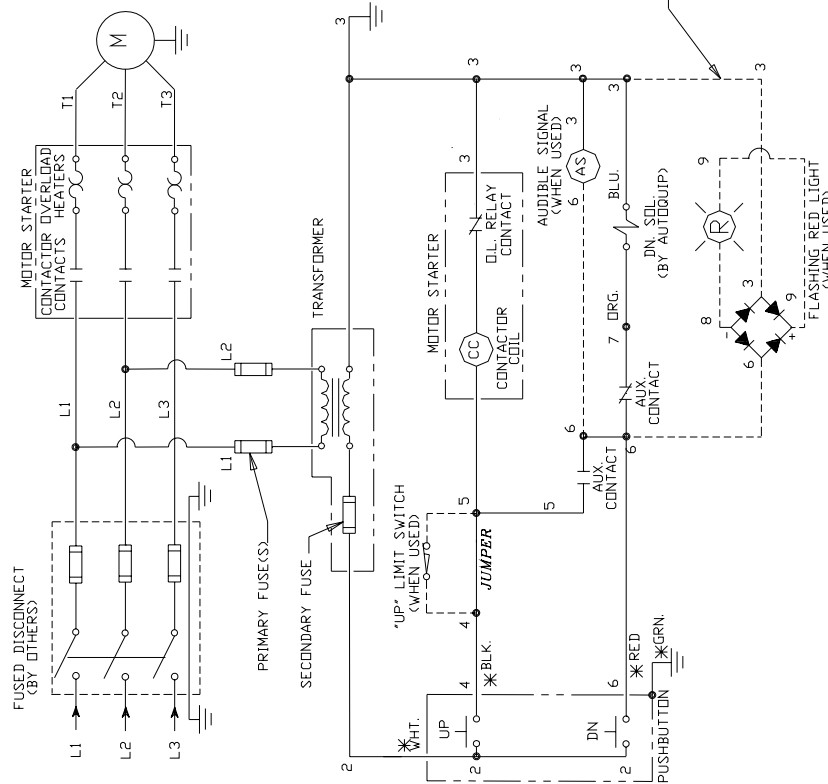
Figure 22 Hydraulic Schematic – “Contractor” Power Unit

GENERAL MAINTENANCE

NOTES:

1. "UP" LIMIT SWITCH (OPTIONAL). WHEN USED, REMOVE JUMPER BETWEEN #4 AND #5.
2. "R" = RED FLASHING LIGHT (OPTIONAL).
3. "AS" = AUDIBLE SIGNAL (OPTIONAL).
4. SEE ASSEMBLY AND/OR SPEC. SHEET FOR SPECIFIC VOLTAGES, OR CONTROLS SUPPLIED AND CONFIGURATION.
5. PUSHBUTTON SHOWN AS TYPICAL PILOT DEVICE.
6. TRANSFORMER PRIMARY CONNECTION DIAGRAMS ARE LOCATED ON INSIDE FRONT COVER OR ON DEVICE.

* COLOR CODE OF STANDARD PENDENT PUSHBUTTON WHEN SUPPLIED



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NO.	REVISIONS	BY	DATE
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DRAWING TITLE: ELEC SCH FOR STD, UTIL & CONTR PU (24V)			
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1	of 1	2	657-0003-0
SIZE	A		

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This drawing is the sole property of Autoquip Corp. and cannot be used for design & construction without permission of Autoquip Corp.	APPROXIMATE WEIGHT:	<2T	

Figure 23 Electrical Schematic – 208-230-460 Volt Three Phase

GENERAL MAINTENANCE

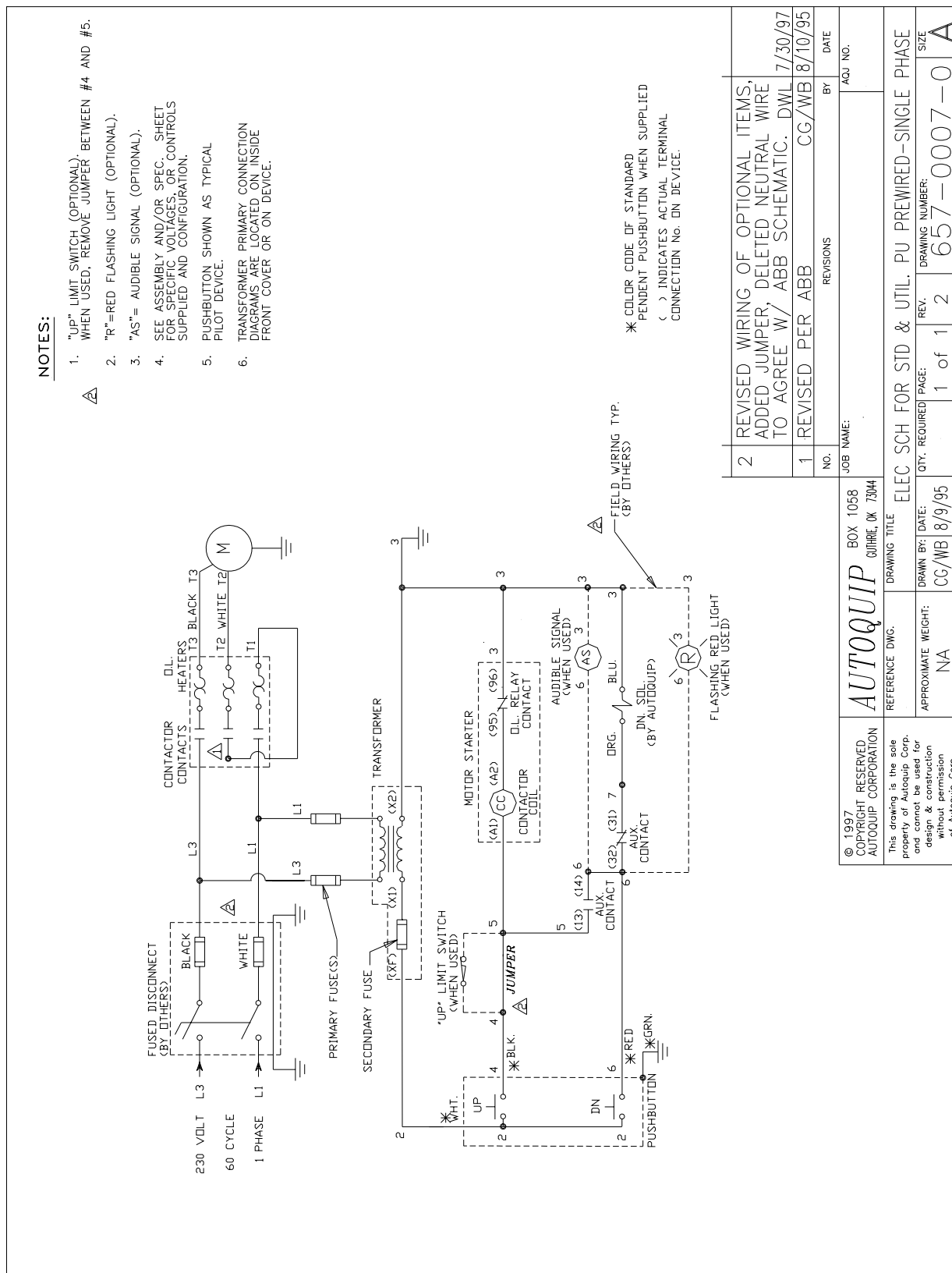


Figure 24 Electrical Schematic 230 V/1PH

GENERAL MAINTENANCE

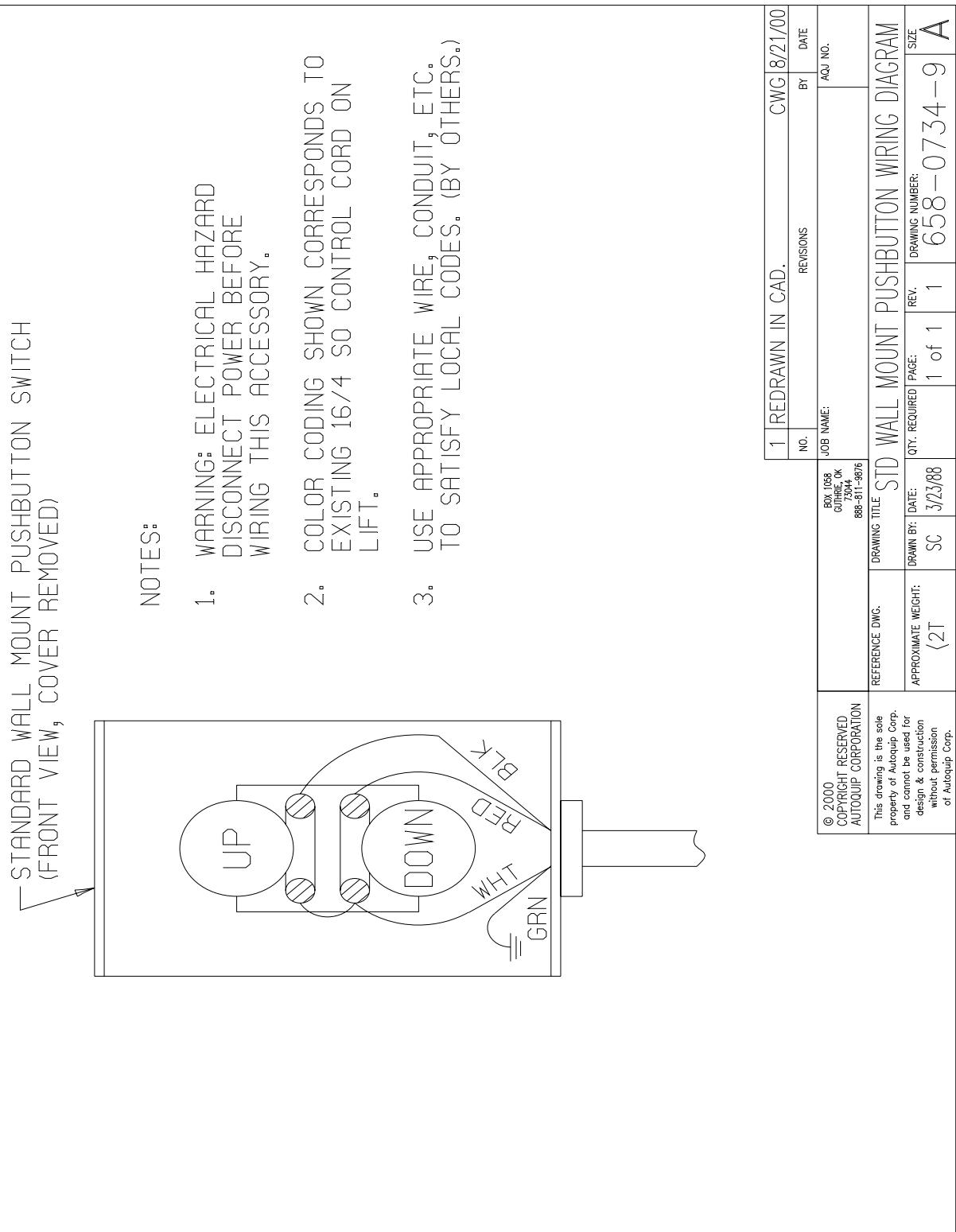


Figure 25 Pushbutton Assembly

GENERAL MAINTENANCE

351-0186-4

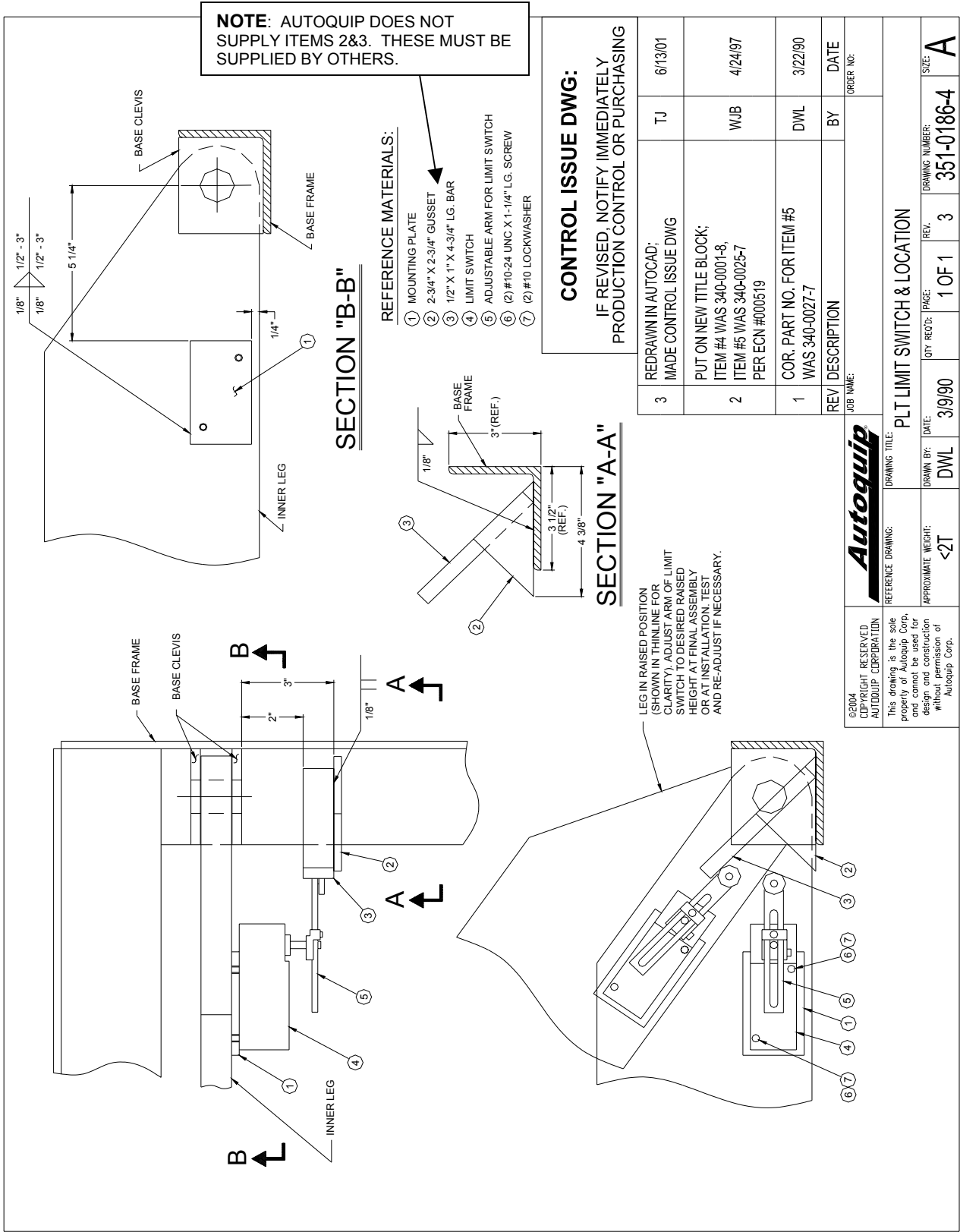


Figure 26 Limit Switch Wiring Diagram – Models 6050/6060

GENERAL MAINTENANCE

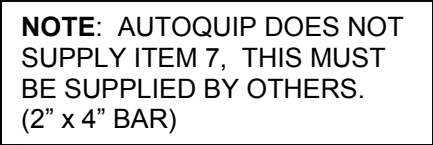


Figure 27 Limit Switch Wiring Diagram – Models 6070/6080/60100

REPLACEMENT PARTS LIST

LEG ASSEMBLY PARTS LIST

Item No.	QTY	Description	Part No. PLT-C 6050 6060	Part No. 6070 6080 60100
1	4	Pin, leg clevis, 1 1/8" x 2" long	52502705	N/A
		Pin, leg clevis, 1 1/2" x 2 15/16" long w/2-ring grooves	N/A	52500287
2	4	Bushing, 1 1/8" ID x 1" long	20022877	N/A
		Bushing, 1 1/2" ID x 1" long	N/A	20023925
3	2	Bushing, 1 1/2" ID x 2" long	20024006	N/A
	8	Bushing, 2" ID x 1" long	N/A	20025326
4	2	Washer, 1/8" TK x 1 1/2" ID x 2 1/2" OD, steel	24024507	N/A
6	2	Retaining Ring, 1 1/2" heavy duty	45400249	N/A
	4	Retaining Ring, 2" std	N/A	45400256
7	4	Washer, 1/8" TK x 1 1/2" ID x 2 1/2" OD, plastic	24094518	N/A
	6	Washer, 1/8" TK x 2" ID x 3" OD, MolyKote steel	N/A	24026213
8	4	Washer, 5/16" STD steel	24050163	N/A
		Washer, 1/16" TK x 1 1/8" ID x 2" OD, steel	N/A	24012353
9	2	Cap Screw, 3/8" – 16 x 1" long	22031132	N/A
	4	Retaining Ring, 1 1/8"	N/A	45400082
10	2	Pin, Cylinder Clevis, 1 1/8" x 7" long w/ 1 ring groove	52502440	N/A
		Pin, Cylinder Clevis, 1 1/8" dia x 4 3/4" long w/2 ring grooves	N/A	52500196
11	4	Washer, 1/16" TK x 1 1/8" ID x 2" OD, plastic	24092306	24092306
12	4	Roller w/ Bushing, 3/4" TK x 1 1/8" ID x 3" OD	52601800	N/A
		Roller w/ Bushing, 1" TK x 1 1/2" ID x 5" OD	N/A	52600319
13	4	Washer, 1/16" TK x 1 1/8" ID x 2" OD, steel	24012353	N/A
	2	Washer, 1/8" TK x 1 1/2" ID x 3" OD, MolyKote steel	N/A	24024713
14	4	Pin, Leg Roller, 1 1/8" dia x 2 3/32" long w/1 ring groove	52502432	N/A
	2	Pin, Outer Leg Roller, 1 1/2" dia x 2 3/8" long w/ ring groove	N/A	52501491
15	4	Retaining Ring, Leg Roller Pin, 1 1/8"	45400082	N/A
	2	Retaining Ring, Leg Roller Pin, 1 1/2" heavy duty	N/A	45400249
16	8	Retaining Ring, Leg Clevis Pin	N/A	45400108
17	16	Washer, 1/64" TK x 1 1/2" ID x 2 1/2" OD, MolyKote steel	N/A	24004517
18	8	Washer, 1/16" TK x 1 1/8" ID x 2" OD, plastic	24092306	N/A
19	2	Pin, Inner Leg Roller, 1 1/2" dia x 2 7/8" long	N/A	52501475

REPLACEMENT PARTS LIST

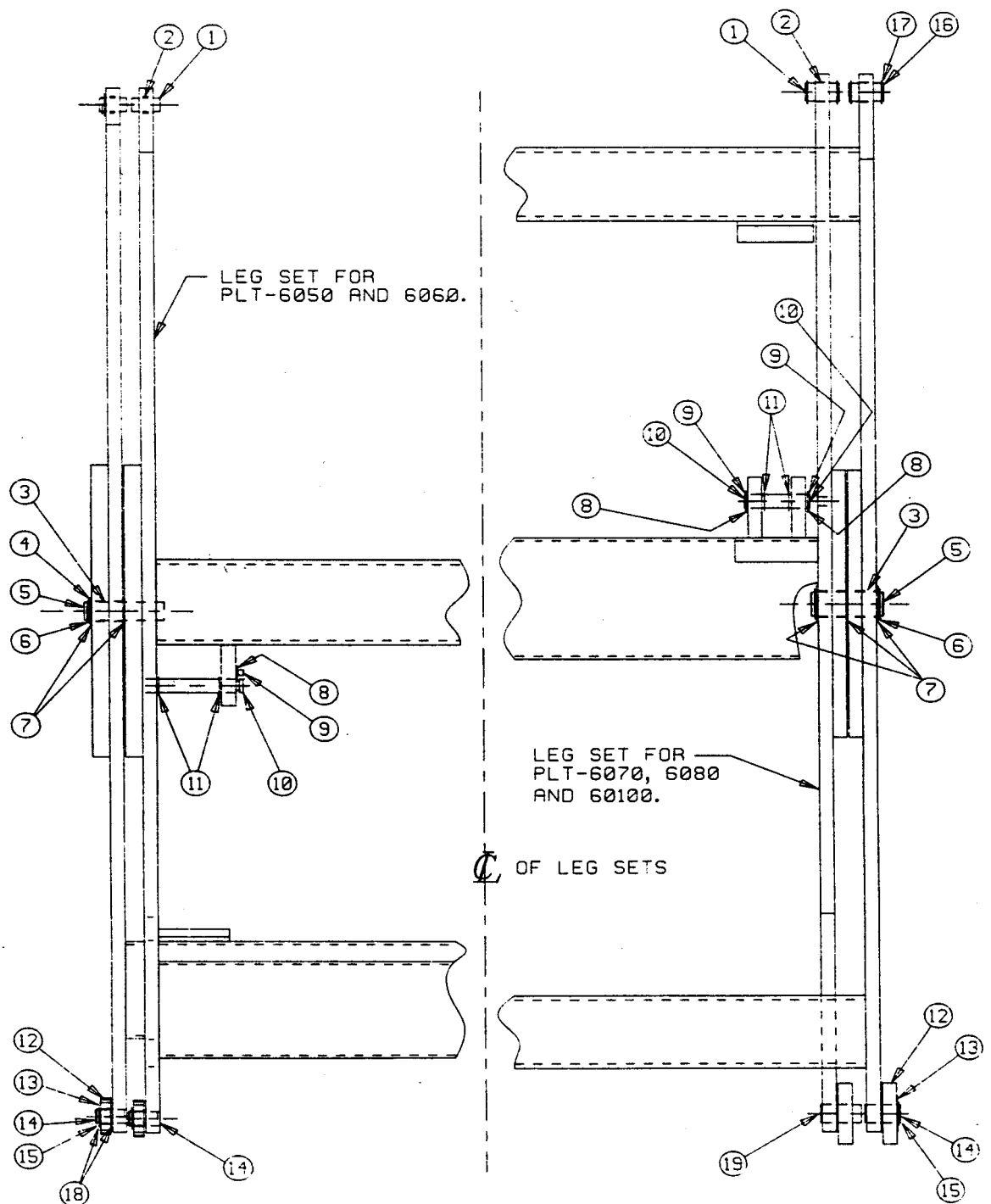


Figure 28 Leg Assembly Parts Detail

REPLACEMENT PARTS LIST

POWER UNIT PARTS LIST

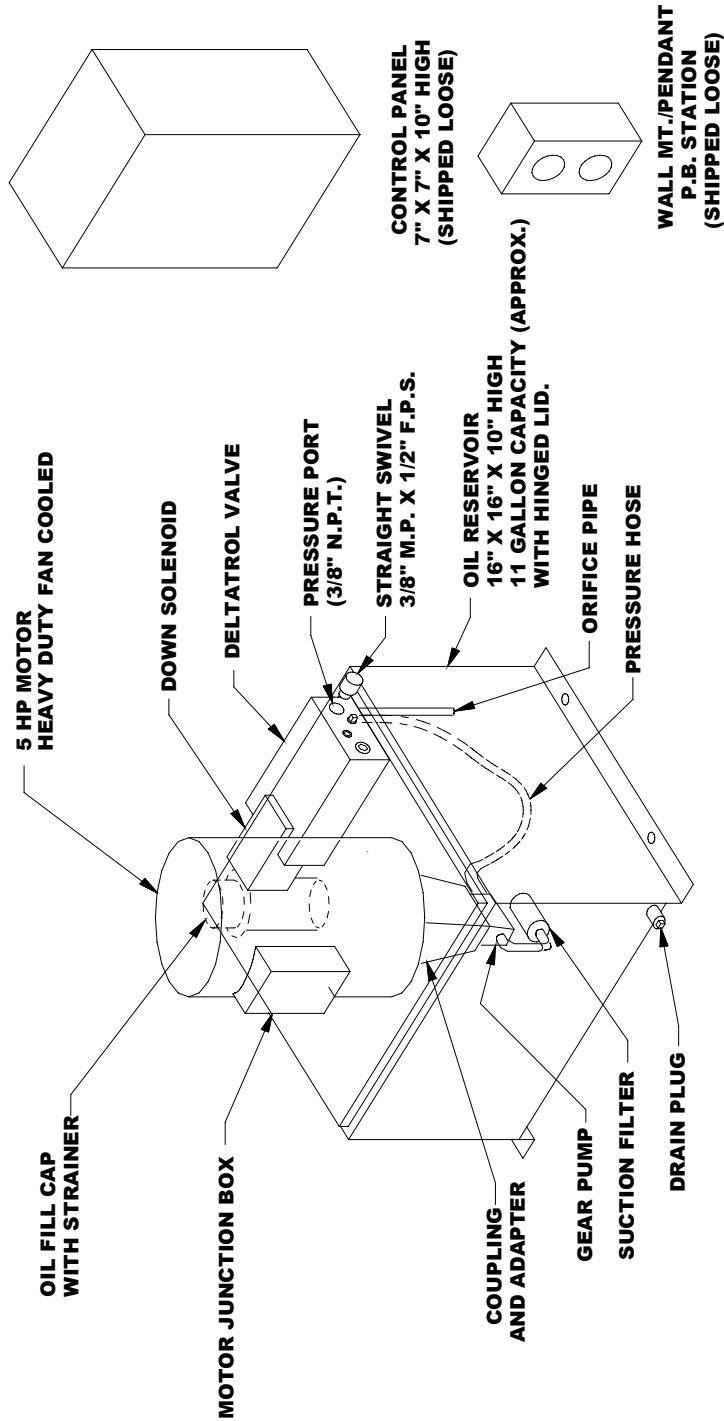
QTY	Description	Vertical Part No.	Contractor Part No.
1	Motor, 5 HP 208/230/460 Volt 3 PH straight shaft	30600449	N/A
	Motor, 5 HP 208/230/460 Volt 3 PH tang shaft	N/A	30600613
1	Motor Coupling, Lovejoy L-095, 1 1/8" bore	20000154	N/A
1	Pump Coupling, Lovejoy L-095, 7/16" bore	20000030	N/A
1	Coupling Rubber Spider	20000162	N/A
1	Pump, 2.25 GPM with straight shaft	40300162	N/A
	Pump, 2.99 GPM with tang shaft and internal relief, check	N/A	40200630
2	1/4" Dyna-Seal Washer for Deltatrol	45901014	N/A
1	Return Pipe Assembly, 6" long	41050485	N/A
1	Sump Strainer	47700075	41050139
1	Hose, Pump to Deltatrol, 3/8" x 18" long w/ 1 swivel	46100020	N/A
1	Deltatrol Kit	41050880	N/A
1	Down Solenoid, 24 volt	32701380	32701290
	Down Solenoid, 115 Volt	32701370	32701300
1	Filler/Breather Cap Assembly	47700208	47701640
1	Oil Reservoir, 16" x 16" x 10"	64000813	N/A
	Oil Reservoir, polyethylene	N/A	64201020
1	Control Panel, 460 VAC/24 VAC controls	35150150	35150150
1	Control Panel, 208-230 VAC/24 VAC controls	35150140	35150140
1	Control Panel, 460 VAC/115 VAC controls	35150155	35150155
1	Control Panel, 208-230 VAC/115 VAC controls	35150145	35150145
1	Control Signal; Pushbutton – "UP"/"DOWN"	36201820	36201820
1	Flow Control Valve	N/A	41502840

REPLACEMENT PARTS LIST

82700270

NOTES:

1. POWER UNIT - 16" X 22" X 29" HIGH.
APPROXIMATE OVERALL DIMENSIONS OF
2. PENDANT PUSHBUTTON CONTROLS.



POWER UNIT-5HP VERTICAL STANDARD

Autoquip

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GUTHRIE, OK 73044-1058
888-811-9876 WWW.AUTOQUIP.COM

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PROPOSAL DRAWING

QUOTE NO. _____

82600270 REV 1, 10/1/01

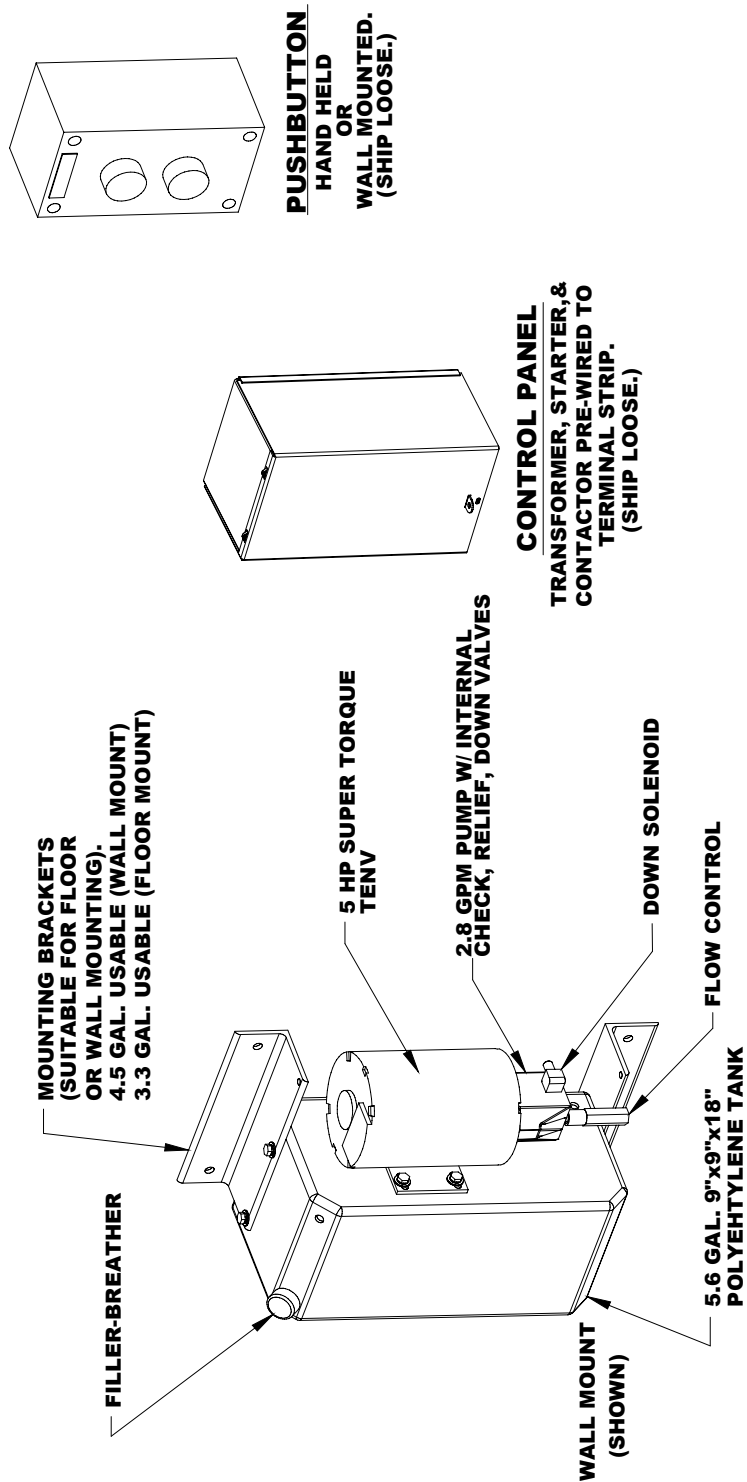
Figure 29 Vertical Power Unit Parts Detail

REPLACEMENT PARTS LIST

826-0084-0

NOTES:

1. APPROXIMATE OVERALL DIMENSIONS OF POWER UNIT - 24"x17"x11" HIGH.
2. CONTROLS PER QUOTATION.



POWER UNIT - CONTRACTOR PLT

PROPOSAL DRAWING
QUOTE NO.

826-0084-0 REV 3, 5-24-02

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Figure 30 Contractor Power Unit Parts Detail

REPLACEMENT PARTS LIST

HYDRAULIC PARTS LIST

ITEM No.	QTY	Description	Part No. PLT-C 6050 6060	Part No. 6070 6080 60100
1	2	Cylinder, 3 1/2" bore x 11 1/2" stroke	42400731	N/A
		Cylinder, 4" bore x 15 7/16" stroke	N/A	42700831
1A	2	Universal Seal Kit - Single Cylinder (for part # 42400731)	45503560	N/A
		Universal Seal Kit - Single Cylinder (for part # 42700831)	N/A	45503570
2	2	Hydraulic elbow, 1/4" MP – 1/4" MP	26100370	26100370
3	2	Velocity Fuse	41800558	41800558
4	1	Hydraulic Hose, 1/4" x 3/8" x 25" lg. w/ swivel one end only	46000490	N/A
		Hydraulic Hose, 1/4" x 18" long w/ swivel one end only	N/A	46000055
5	1	Hydraulic Hose, 1/4" x 3/8" x 10" lg. w/ swivel one end only	46000480	N/A
		Hydraulic Hose, 1/4" x 18" long w/ swivel one end only	N/A	46000055
6	2	Hex Reducer Bushing, 3/8" to 1/4"	N/A	26300103
7	1	Hydraulic Tee, 3 way 3/8" FP	26150102	26150102
8	1	Hydraulic Hose, 3/8" x 72" long	46100550	46100087
9	1	No Longer Used		
10	1	Pipe Tee, 1/2" NPT	26150151	N/A
		Reducer Coupling, 1/2" to 3/8"	N/A	25380080
10A	1	Pipe Plug, 1/2" NPT	25100306	N/A
11	1	Hose Clamp Set	52200029	N/A
12	1	Pipe Nipple, 1/2" x 2-1/2" (96" long platforms)	25001480	N/A
		Pipe Nipple, 1/2" x 14-1/2" (120" long platforms)	25001490	N/A
13	1	Pipe Elbow, 1/2" NPT	26100206	N/A

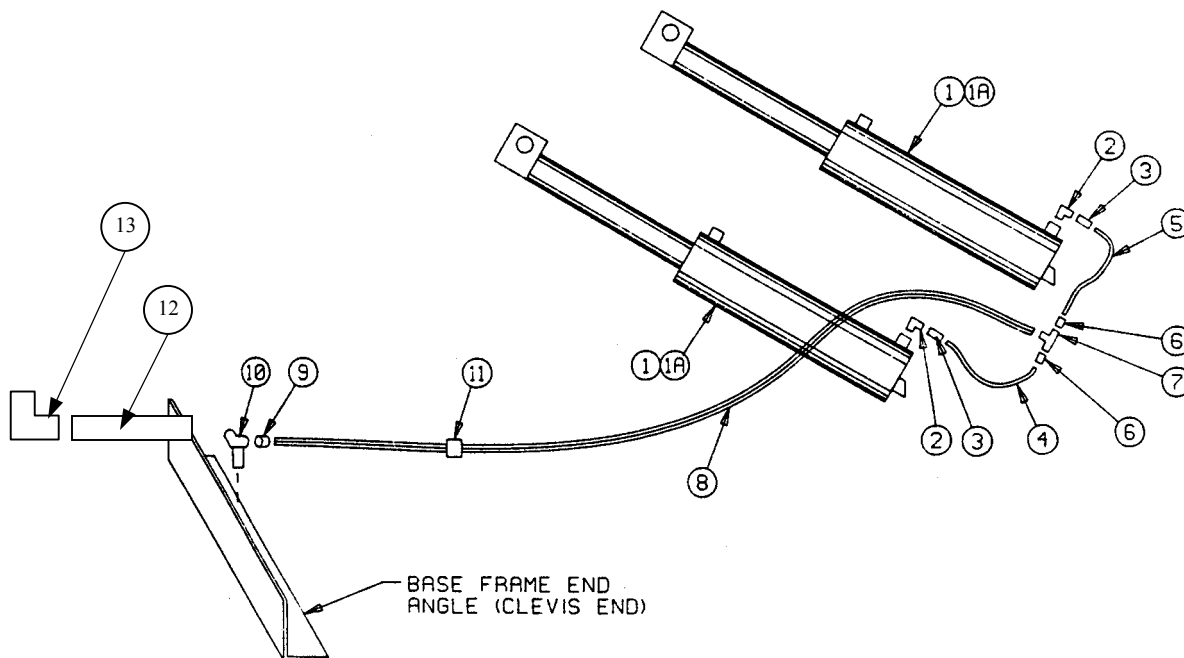


Figure 31 Hydraulic Parts Detail

TROUBLESHOOTING ANALYSIS



DANGER!

To avoid personal injury, **NEVER** go under the lift platform until the load is removed and the scissors mechanism is securely blocked in the open position. See "Lift Blocking Instructions" section.

PROBLEM	POSSIBLE CAUSE AND SOLUTION
Lift does not raise.	<ul style="list-style-type: none">• The motor voltage/wiring may be incorrect.• The hydraulic line or hose may be leaking.• Oil in the reservoir may be low. Add oil as necessary (See the "Routine Maintenance" section.)• The load may exceed the rating. (See the "Specifications" section.)• The suction screen may be clogged. Remove and clean the screen. Drain and replace the oil.• The suction line may be leaking air due to a loose fitting. Tighten as needed.• The breather holes in the reservoir fill plug may be clogged. Remove and clean.• The "Down" valve may be energized by faulty wiring or stuck open. Remove the solenoid and check.• The power unit pump may be defective• The structural members of the lift may be in a bind.• The manual lowering device may be engaged.
Lift seems bouncy during operation.	<ul style="list-style-type: none">• There may be air in the hydraulic system. Bleed the air from the cylinder• Oil in the reservoir may be low. Add oil as necessary (See the "Routine Maintenance" section.)• The power unit suction strainer may be clogged.• The power unit suction line may be leaking.• There may be foreign material on the roller plate.

TROUBLESHOOTING ANALYSIS

PROBLEM	POSSIBLE CAUSE AND SOLUTION
Lift will not lower.	<ul style="list-style-type: none"> • The down solenoid may be malfunctioning. • The maintenance leg could be installed. • The structural members may be in a bind. • The tubing or hose is obstructed or broken. Check for obstruction in the line. • The return filter may be clogged. • The velocity fuse may be locked. Do not attempt to remove the velocity fuse. The following steps should be followed: <ol style="list-style-type: none"> 1. Remove the load from the lift. Inspect all fittings, hoses, and other hydraulic components for leaks or damage. 2. If no leak or damage is noticed, attempt to pressurize the lifting cylinder by depressing the "UP" button on the controller for a few seconds. Immediately up releasing the "UP" button, depress the "DOWN" button. If the lift starts to lower, continue pressing the "DOWN" button until the lift is in the fully lowered position. 3. If the lift does not lower after trying Step 2, wait approximately 10 – 15 minutes for the pressure in the hydraulic system to equalize. Then, depress the "DOWN" button until the lift is in the fully lowered position. 4. Once the lift is in the fully lowered position, bleed the air from the hydraulic system by depressing the "DOWN" button. Hold the "DOWN" button for approximately 60 seconds. This step may need to be repeated several times to fully remove the air in the system by raising the lift to 50% of its travel and then lowering it. • Should the above steps not correct the problem, contact <i>Autoquip</i> to obtain instruction for further action.

TROUBLESHOOTING ANALYSIS

PROBLEM	POSSIBLE CAUSE AND SOLUTION
Lift raises slowly.	<ul style="list-style-type: none"> • The structural members of the lift may be binding. • The tubing or hose is obstructed or broken. Where pipe is used, check for obstruction in the line. • The hydraulic line or hose may be leaking. • The oil viscosity is not suited for the environmental conditions. Refer to "Routine Maintenance" section for oil recommendations. • Check the oil level in the reservoir. • The motor voltage/wiring may be incorrect. • The suction screen may be clogged. Remove and clean the screen. Drain and replace the oil. • The suction line may be leaking air due to a loose fitting. Tighten as needed. • The breather holes in the reservoir fill plug may be clogged. Remove and clean. • The power unit pump may be defective.
Lift lowers slowly.	<ul style="list-style-type: none"> • The structural members of the lift are binding. • The tubing or hose is obstructed or broken. Where pipe is used, check for obstruction in the line. • The oil viscosity is not suited for the environmental conditions. Refer to "Routine Maintenance" section for oil recommendations. • The return filter may be clogged due to dirt or damage.

TROUBLESHOOTING ANALYSIS

PROBLEM	POSSIBLE CAUSE AND SOLUTION
Lift will not remain in raised position.	<ul style="list-style-type: none">• The cylinder packing may be leaking.• The pump or Deltatrol regulator is not seating.• The pump or Deltatrol check valve is not seating.• The hydraulic tubing, hose, or fitting is leaking oil.• The return filter may be clogged.